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Agencies in this issue—

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- Agriculture Department
- Air Force Department
- Civil Aeronautics Board
- Consumer and Marketing Service
- Farmers Home Administration
- Federal Aviation Agency
- Federal Communications Commission
- Federal Home Loan Bank Board
- Federal Maritime Commission
- Federal Trade Commission
- Fish and Wildlife Service
- Food and Drug Administration
- Interstate Commerce Commission
- Land Management Bureau
- National Bureau of Standards
- Securities and Exchange Commission
- Small Business Administration

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1934

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Title 21—FOOD AND DRUGS

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SUBCHAPTER B—FOOD AND FOOD PRODUCTS

PART 121—FOOD ADDITIVES

Republication of Part

Effective on the date of publication in the FEDERAL REGISTER, Part 121 is republished in its entirety, for the purpose of incorporating amendments thereto effected since January 1, 1965,[1] and making editorial changes and nonsubstantive amendments for the purpose of clarification or effecting consistency throughout this part. This order revokes all prior publications.

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121.3006 Ultraviolet radiation for the processing and treatment of food.

Subpart A—Definitions and Procedural and Interpretative Regulations

AUTHORITY: The provisions of this Subpart A issued under secs. 409, 701, 52 Stat. 1055, as amended, 72 Stat. 1785; 21 U.S.C. 348, 371, except as otherwise noted.

§ 121.1 Definitions and interpretations.

(a) "Secretary" means the Secretary of Health, Education, and Welfare.

(b) "Department" means the Department of Health, Education, and Welfare.

(c) "Commissioner" means the Commissioner of Food and Drugs.

(d) As used in this part, the term "act" means the Federal Food, Drug, and Cosmetic Act approved June 25, 1938 (52 Stat. 1040 et seq., as amended; 21 U.S.C. 301–392).

(e) "Food additives" includes all substances not exempted by section 201(s) of the act, the intended use of which results or may reasonably be expected to result, directly or indirectly, either in their becoming a component of food or otherwise affecting the characteristics of food. A material used in the production of containers and packages is subject to the definition if it may reasonably be expected to become a component, or to affect the characteristics, directly or indirectly, of food packed in the container. "Affecting the characteristics of food" does not include such physical effects, as protecting contents of packages, preserving shape, and preventing moisture loss. If there is no migration of a packaging component from the package to the food, it does not become a component of the food and thus is not a food additive. A substance that does not become a component of food, but that is used, for example, in preparing an ingredient of the food to give a different flavor, texture, or other characteristic in the food, may be a food additive.

(f) "Common use in food" refers to consumption of a substance by consumers, regardless of the number of manufacturers who may produce it.

(g) The word "substance" in the definition of the term "food additive" includes a food or food component consisting of one or more ingredients.

(h) "Scientific procedures" include not only original animal, analytical, and other scientific studies, but also an unprejudiced compilation of reliable information, both favorable and unfavorable, drawn from the scientific literature.

(i) "Safe" means that there is convincing evidence which establishes with reasonable certainty that no harm will result from the intended use of the food additive.

§ 121.2 Pesticide chemicals in processed foods.

When pesticide chemical residues occur in processed foods due to the use of raw agricultural commodities that bore or contained a pesticide chemical in conformity with an exemption granted or a tolerance prescribed under section 408 of the act, the processed food will not be regarded as adulterated so long as good manufacturing practice has been followed in removing any residue from the raw agricultural commodity in the processing (such as by peeling or washing) and so long as the concentration of the residue in the processed food when ready to eat is not greater than the tolerance prescribed for the raw agricultural commodity. But when the concentration of residue in the processed food when ready to eat is higher than the tolerance prescribed for the raw agricultural commodity, the processed food is adulterated unless the higher concentration is permitted by a tolerance obtained under section 409 of the act. For example, if fruit bearing a residue of 7 parts per million of DDT permitted on the raw agricultural commodity is dried and a residue in excess of 7 parts per million of DDT results on the dried fruit, the dehydrated fruit is adulterated unless the higher tolerance for DDT is authorized by the regulations in this part. Food that is itself ready to eat, and which contains a higher residue than allowed for the raw agricultural commodity, may not be legalized by blending or mixing with other foods to reduce the residue in the mixed food below the tolerance prescribed for the raw agricultural commodity.

§ 121.3 Substances added to food which are not generally recognized as safe and substances that are generally recognized as safe.

(a) In general, any substance added to food which has no history of common use as a food ingredient should be regarded as a substance that is not generally recognized as safe for its intended food use, for the purpose of sections 201(s) and 402(a)(2)(C) of the act, unless it has been scientifically tested and shown to be safe.

(b) Section 121.101 contains a partial list of substances that are generally recognized among experts qualified by scientific training and experience to evaluate the safety of such substances as ingredients in food as safe for such use under the conditions set forth in that section. No substance will be removed from this list, nor will the permitted conditions of use be modified, without prior notice and a statement of the reasons for the action.

(c) Substances other than those listed in § 121.101 for which prior sanction or approval under the Federal Food, Drug, and Cosmetic Act has been given, are not listed. Upon written request, setting forth the specific product and a specific usage, the Commissioner will advise interested persons whether such use of such product has been sanctioned or approved. Food additives sanctioned for use in foods for which standards of identity have been prescribed are listed in the standards. Except in the case of an imminent hazard to public health, no prior sanction or approval will be withdrawn or modified without prior notice and a statement of the reasons for the action. Such notice and statement will be sent to the person to whom the sanction or approval was granted and to any other person who has been advised concerning such sanction or approval, if practicable. Otherwise, the notice and statement will be published in the FEDERAL REGISTER.

(d) The Commissioner, upon written request, specifying the intended conditions of use and other pertinent information about a substance, will advise an interested person whether in his opinion the substance is a food additive.

(e) The training and experience necessary to qualify experts to evaluate the safety of food additives, for the purposes of section 201(s) of the act, are sufficient training and experience in biology, medicine, pharmacology, physiology, toxicology, veterinary medicine, or other appropriate science to recognize and evaluate the behavior and effects of chemical substances in the diet of man and of animals.

§ 121.4 Tolerances for related food additives.

(a) Food additives that cause similar or related pharmacological effects will be regarded as a class, and in the absence of evidence to the contrary, as having additive toxic effects and will be considered as related food additives.

(b) Tolerances established for such related food additives may limit the amount of a common component that may be present, or may limit the amount of biological activity (such as cholinesterase inhibition) that may be present, or may limit the total amount of related food additives that may be present.

(c) Where food additives from two or more chemicals in the same class are present in or on a food, the tolerance for the total of such additives shall be the same as that for the additive having the lowest numerical tolerance in this class, unless there are available methods that permit quantitative determination of the amount of each food additive present or unless it is shown that a higher tolerance is reasonably required for the combined additives to accomplish the physical or technical effect for which such combined additives are intended and that the higher tolerance will be safe.

(d) Where residues from two or more additives in the same class are present in or on a food and there are available methods that permit quantitative determination of each residue, the quantity of combined residues that are within the tolerance may be determined as follows:

(1) Determine the quantity of each residue present.

(2) Divide the quantity of each residue by the tolerance that would apply if it occurred alone, and multiply by 100 to determine the percentage of the permitted amount of residue present.

(3) Add the percentages so obtained for all residues present.

(4) The sum of the percentages shall not exceed 100 percent.

§ 121.5 Safety factors to be considered.

In accordance with section 409(c)(5)(C) of the act, the following safety factors will be applied in determining whether the proposed use of a food additive will be safe: Except where evidence is submitted which justifies use of a different safety factor, a safety factor in applying animal experimentation data to man of 100 to 1, will be used; that is, a food additive for use by man will not be granted a tolerance that will exceed 1/100th of the maximum amount demonstrated to be without harm to experimental animals.

§ 121.6 General principles for evaluating the safety of food additives.

(a) In reaching a decision on any petition filed under section 409 of the act, the Commissioner will give full consideration to the specific biological properties of the compound and the adequacy of the methods employed to demonstrate safety for the proposed use, and the Commissioner will be guided by the principles and procedures for establishing the safety of food additives stated in current publications of the National Academy of Sciences-National Research Council. A petition will not be denied, however, by reason of the petitioner's having followed procedures other than those outlined in the publications of the National Academy of Sciences-National Research Council if, from available evidence, the Commissioner finds that the procedures used give results as reliable as, or more reliable than, those reasonably to be expected from the use of the outlined procedures. In reaching a decision, the Commissioner will give due weight to the anticipated levels and patterns of consumption of the additive specified or reasonably inferable. For the purposes of this section, the principles for evaluating safety of additives set forth in the above-mentioned publications will apply to any substance that may properly be classified as a food additive as defined in section 201(s) of the act.

(b) Upon written request describing the proposed use of an additive and the proposed experiments to determine its safety, the Commissioner will advise a person who wishes to establish the safety of a food additive whether he believes the experiments planned will yield data adequate for an evaluation of the safety of the additive.

§ 121.7 Food additives or pesticide chemicals for which new-drug applications are required.

(a) A substance that is a new drug within the meaning of section 201(p) of the act may also be a food additive within the meaning of section 201(s) by reason of the fact that its intended use results or may reasonably be expected to result, directly or indirectly, in its or its ingredients' conversion products becoming a component or otherwise affecting the characteristics of a food. When an application for a new drug that is intended for administration to a food-producing animal is submitted, it will also be evaluated under section 408 or 409 of the act (giving due consideration to data previously filed by the applicant) when there is a reasonable possibility that a residue of the drug may be present or otherwise affect the characteristics of the edible products of such animals, and a regulation issued where necessary. Where a substance is both a new drug and a food additive, the submission of a new-drug application in accordance with the regulations appearing in Part 130 of this chapter will also be construed as a petition for the establishment of a regulation for the use of the substance as a food additive. A new-drug application will not be approved for a use that results in the substance becoming a food additive until a regulation is established under section 408 or 409 of the act. A food-additive regulation under section 409 of the act will not be established when the additive results from the use of a new drug for which a new-drug application cannot be approved. The new-drug application and the establishment of a regulation respecting the food additive or pesticide chemical use will be acted upon simultaneously.

(b) With respect to those uses of a new drug that result in its becoming a food additive, the provisions of these regulations shall apply concerning the procedure to be followed in establishing a food-additive regulation. Upon determination that a new-drug application contains a petition for the establishment of a food-additive regulation, the Division of New Drugs of the Food and Drug Administration shall so notify the applicant prior to the date of approval of the application, and shall inform him that his application with respect to the uses of the new drug which result in its becoming a food additive will be processed under the regulations in this part. Upon the issuance of the food-additive regulation, the Division of New Drugs will notify the applicant that his application is approved to the extent allowed by the regulation. In the event the proceeding for the food-additive regulation results in the denial of a regulation allowing the use of the new drug as a food additive, the applicant shall be notified that the refusal to approve his new-drug application is final with respect to the use of the new drug for uses resulting in its becoming a food additive.

§ 121.8 Food additives in standardized foods.

(a) The inclusion of food ingredients in Part 121 does not imply that these ingredients may be used in standardized foods unless they are recognized as optional ingredients in applicable food standards. Where a petition is received for the issuance or amendment of a regulation establishing a definition and standard of identity for a food under section 401 of the act, which proposes the inclusion of a food additive in such definition and standard of identity, the provisions of the regulations in this part shall apply with respect to the information that must be submitted with respect to the food additive. Since section 409(b)(5) of the act requires that the Secretary publish notice of a petition for the establishment of a food-additive regulation within 30 days after filing, notice of a petition relating to a definition and standard of identity shall also be published within that time limitation if it includes a request, so designated, for the establishment of a regulation pertaining to a food additive.

(b) If a petition for a definition and standard of identity contains a proposal for a food-additive regulation, and the petitioner fails to designate it as such, the Commissioner, upon determining that the petition includes a proposal for a food-additive regulation, shall so notify the petitioner and shall thereafter proceed in accordance with the regulations in this part.

(c) A regulation will not be issued allowing the use of a food additive in a food for which a definition and standard of identity is established, unless its issuance is in conformity with section 401 of the act or with the terms of a temporary permit issued under § 10.5 of this chapter. When the contemplated use of such additive complies with the terms of a temporary permit, the food additive regulation will be conditioned on such compliance and will expire with the expiration of the temporary permit.

§ 121.9 Food additives for which certification is required.

(a) An antibiotic drug that is subject to the certification requirements of sections 502(l) and 507 of the act may also be a food additive within the meaning of section 201(s), by reason of the fact that its intended use results or may reasonably be expected to result, directly or indirectly, in it, its ingredients, or conversion products becoming components of or otherwise affecting the characteristics of a food. Any such drug that is intended for administration to a food-producing animal will also be evaluated under section 408 or section 409 (giving due consideration to data previously filed by the applicant) when there is a reasonable possibility that a residue of the drug may be present or otherwise affect the characteristics of the edible products of such animals and a regulation issued where necessary. Where a substance is both a certifiable drug and a food additive, the submission of the information required by the regulations appearing in Parts 146, 146a, 146b, 146c, 146d, and 146e of this chapter will also be construed as a petition for the establishment of a regulation for the use of the substance as a food additive. An antibiotic application will not be permitted to become effective for a use that results in the substance becoming a food additive until a regulation is established under section 408 or section 409 of the act. The antibiotic application and the establishment of a regulation respecting the food additive use will be acted upon simultaneously.

(b) With respect to those uses of an antibiotic drug that result in its becoming a food additive, the provisions of the regulations in this part shall apply concerning the procedure to be followed in establishing a food-additive regulation. Upon determination that an antibiotic application contains a petition for the establishment of a food-additive regulation, the Division of Antibiotics of the Food and Drug Administration shall so notify the applicant prior to the effective date of the application and shall inform him that his application with respect to the uses of the antibiotic which result in its becoming a food additive will be processed under the regulations in this part. Upon the issuance of a food-additive regulation, the Division of Antibiotics will notify the applicant that his application is effective to the extent allowed by the regulation. In the event the proceeding for the food-additive regulation results in the denial of a regulation allowing the use of the antibiotic drug as a food additive, the applicant shall be notified that the denial of his antibiotic application is final with respect to the use of such drug for use resulting in its becoming a food additive.

§ 121.10 Fluorine-containing compounds; statement of policy.

The Commissioner of Food and Drugs has concluded that it is in the interest of the public health to limit the addition of fluorine compounds to foods (a) to that resulting from the fluoridation of public water supplies as stated in § 3.27 of this chapter and (b) to that authorized by regulations under section 408 of the Federal Food, Drug, and Cosmetic Act (21 CFR Part 120). It is further concluded that with the exception of certain dentifrices which have been excluded from prescription-dispensing requirements, preparations containing added fluorine compounds should be limited to sale on the prescription of practitioners licensed by law to administer drugs and in accordance with sections 503 and 505 of the Federal Food, Drug, and Cosmetic Act.

§ 121.51 Petitions proposing regulations for food additives.

(a) Petitions to be filed with the Commissioner under the provisions of section 409(b) of the act shall be submitted in triplicate. If any part of the material submitted is in a foreign language, it shall be accompanied by an accurate and complete English translation. The petition shall state petitioner's post-office address to which published notices or orders issued or objections filed pursuant to section 409 of the act may be sent.

(b) Pertinent information may be incorporated in, and will be considered as part of, a petition on the basis of specific reference to such information submitted to and retained in the files of the Food and Drug Administration. However, any reference to unpublished information furnished by a person other than the applicant will not be considered unless use of such information is authorized in a written statement signed by the person who submitted it. Any reference to published information offered in support of a food-additive petition should be accompanied by reprints or photostatic copies of such references.

(c) Petitions shall include the following data and be submitted in the following form:

(Date) --------------------

Name of petitioner ----------------------
Post-office address ----------------------
Date ------------------------------------
Name of food additive and proposed use ----

Petitions Control Branch
Food and Drug Administration
Department of Health, Education, and Welfare
Washington, D.C. 20204.

DEAR SIRS:

The undersigned, ---------------------- submits this petition pursuant to section 409(b)(1) of the Federal Food, Drug, and Cosmetic Act with respect to ------------
----
(Name of the food additive and proposed use)

Attached hereto, in triplicate, and constituting a part of this petition, are the following:

A. The name and all pertinent information concerning the food additive, including chemical identity and composition of the food additive, its physical, chemical, and biological properties, and specifications prescribing the minimum content of the desired component(s) and identifying and limiting the reaction byproducts and other impurities. Where such information is not available, a statement as to the reasons why it is not should be submitted.

When the chemical identity and composition of the food additive is not known, the petition shall contain information in sufficient detail to permit evaluation regarding the method of manufacture and the analytical controls used during the various stages of manufacturing, processing, or packing of the food additive which are relied upon to establish that it is a substance of reproducible composition. Alternative methods and controls and variations in methods and controls within reasonable limits that do not affect the characteristics of the substance or the reliability of the controls may be specified.

If the food additive is a mixture of chemicals, the petition shall supply a list of all substances used in the synthesis, extraction, or other method of preparation, regardless of whether they undergo chemical change in the process. Each substance should be identified by its common English name and complete chemical name, using structural formulas when necessary for specific identification. If any proprietary preparation is used as a component, the proprietary name should be followed by a complete quantitative statement of composition. Reasonable alternatives for any listed substance may be specified.

If the petitioner does not himself perform all the manufacturing, processing, and packing operations for a food additive, the petition shall identify each person who will perform a part of such operations and designate the part.

The petition shall include stability data, and, if the data indicate that it is needed to insure the identity, strength, quality, or purity of the additive, the expiration date that will be employed.

B. The amount of the food additive proposed for use and the purposes for which it is proposed, together with all directions, recommendations, and suggestions regarding the proposed use, as well as specimens of the labeling proposed for the food additive and any labeling that will be required by applicable provisions of the Federal Food, Drug, and Cosmetic Act on the finished food by reason of the use of the food additive. If the additive results or may reasonably be expected to result from the use of packaging material, the petitioner shall show how this may occur and what residues may reasonably be anticipated.

(Typewritten or other draft-labeling copy will be accepted for consideration of the petition, provided a statement is made that final printed labeling identical in content to the draft copy will be submitted as soon as available and prior to the marketing of the food additive.

If the food additive is one for which a tolerance limitation is required to assure its safety, the level of use proposed should be no higher than the amount reasonably required to accomplish the intended physical or other technical effect, even though the safety data may support a higher tolerance.)

C. Data establishing that the food additive will have the intended physical or other technical effect or that it may reasonably be expected to become a component, or to affect the characteristics, directly or indirectly, of food and the amount necessary to accomplish this. These data should include information in sufficient detail to permit evaluation with control data.

D. A description of practicable methods to determine the amount of the food additive in the raw, processed, and/or finished food and of any substance formed in or on such food because of its use. The test proposed shall be one that can be used for food-control purposes and that can be applied with consistent results by any properly equipped and trained laboratory personnel.

E. Full reports of investigations made with respect to the safety of the food additive.

(A petition may be regarded as incomplete unless it includes full reports of adequate tests reasonably applicable to show whether or not the food additive will be safe for its intended use. The reports ordinarily should include detailed data derived from appropriate animal and other biological experiments in which the methods used and the results obtained are clearly set forth. The petition shall not omit without explanation any reports of investigations that would bias an evaluation of the safety of the food additive.)

F. Proposed tolerances for the food additive, if tolerances are required in order to insure its safety. A petitioner may include a proposed regulation.

G. If submitting petition to modify an existing regulation issued pursuant to section 409(c)(1)(A) of the act, full information on each proposed change that is to be made in the original regulation must be submitted. The petition may omit statements made in the original petition concerning which no change is proposed. A supplemental petition must be submitted for any change beyond the variations provided for in the original petition and the regulation issued on the basis of the original petition.

Yours very truly,
Petitioner ______________________
By ______________________
(Indicate authority)

(d) The petitioner will be notified of the date on which his petition is filed; and an incomplete petition, or one that has not been submitted in triplicate, will usually be retained but not filed as a petition under section 409 of the act. The petitioner will be notified in what respects his petition is incomplete.

(e) The petition must be signed by the petitioner or by his attorney or agent, or (if a corporation) by an authorized official.

(f) The data specified under the several lettered headings should be submitted on separate sheets or sets of sheets, suitably identified. If such data have already been submitted with an earlier application, the present petition may incorporate it by specific reference to the earlier. If part of the data have been submitted by the manufacturer of the food additive as a master file, the petitioner may refer to the master file if and to the extent he obtains the manufacturer's written permission to do so. The manufacturer may authorize specific reference to the data without disclosure to the petitioner. Nothing herein shall prevent reference to published data.

(g) A petition shall be retained but shall not be filed if any of the data prescribed by section 409(b) of the act are lacking or are not set forth so as to be readily understood.

(h) Data in a petition regarding any method or process entitled to protection as a trade secret will be held confidential and not revealed unless it is necessary to do so in the record of an administrative hearing preliminary to judicial proceedings under section 409 of the act. Other data in the petition will not be revealed to persons other than the petitioner and persons engaged in the enforcement of the act beyond that which is necessary to comply with section 409(b)(5) (notice of the regulation proposed) and 409(c)(1) (order acting on the petition).

(i)(1) Except where the petition involves a new drug, within 15 days after receipt, the Commissioner will notify the petitioner of acceptance or nonacceptance of a petition, and if not accepted the reasons therefor. If accepted, the date of the notification letter sent to petitioner becomes the date of filing for the purposes of section 409(b)(5) of the act. If the petitioner desires, he may supplement a deficient petition after being notified regarding deficiencies. If the supplementary material or explanation of the petition is deemed acceptable, petitioner shall be notified. The date of such notification becomes the date of filing. If the petitioner does not wish to supplement or explain the petition and requests in writing that it be filed as submitted, the petition shall be filed and the petitioner so notified. The date of such notification becomes the date of filing. Where the petition involves a new drug, notification to the petitioner will be made within 30 days.

(2) The Commissioner will publish in the FEDERAL REGISTER within 30 days from the date of filing of such petition, a notice of the filing, the name of the petitioner, and a brief description of the proposal in general terms. In the case of a food additive which becomes a component of food by migration from packaging material, the notice shall include the name of the migratory substance, and where it is different from that of one of the original components, the name of the parent component, the maximum quantity of the migratory substance that is proposed for use in food, and the physical or other technical effect which the migratory substance or its parent component is intended to have in the packaging material. A copy of the notice will be mailed to the petitioner when the original is forwarded to the FEDERAL REGISTER for publication.

(j) The Commissioner may request a full description of the methods used in, and the facilities and controls used for, the production of the food additive, or a sample of the food additive, articles used as components thereof, or of the food in which the additive is proposed to be used, at any time while a petition is under consideration. The Commissioner shall specify in the request for a sample of the food additive, or articles used as components thereof, or of the food in or on which the additive is proposed to be used, a quantity deemed adequate to permit tests of analytical methods to determine quantities of the food additive present in foods for which it is intended to be used or adequate for any study or investigation reasonably required with respect to the safety of the food additive or the physical or technical effect it produces. The data used for computing the 90-day limit for the purposes of section 409(c)(2) of the act shall be moved forward 1 day for each day after the mailing date of the request taken by the petitioner to submit the sample. If the information or sample is requested a reasonable time in advance of the 180 days, but is not submitted within such 180 days after filing of the petition, the petition will be considered withdrawn without prejudice.

(k) The Commissioner will forward for publication in the FEDERAL REGISTER, within 90 days after filing of the petition (or within 180 days if the time is extended as provided for in section 409(c)(2) of the act), a regulation prescribing the conditions under which the food additive may be safely used (including, but not limited to, specifications as to the particular food or classes of food in or on which such additive may be used, the maximum quantity that may be used or permitted to remain in or on such food, the manner in which such additive may be added to or used in or on such food, and any directions or other labeling or packaging requirements for such additive deemed necessary by him to assure the safety of such use), and prior to the forwarding of the order to the FEDERAL REGISTER for publication shall notify the petitioner of such order and the reasons for such action; or by order deny the petition, and shall notify the petitioner of such order and of the reasons for such action.

(l) If the Commissioner determines that additional time is needed to study and investigate the petition, he shall by by written notice to the petitioner extend the 90-day period for not more than 180 days after the filing of the petition.

§ 121.52 Withdrawal of petitions without prejudice.

(a) In some cases the Commissioner will notify the petitioner that the petition, while technically complete, is inadequate to justify the establishment of a regulation or the regulation requested by petitioner. This may be due to the fact that the data are not sufficiently clear or complete. In such cases, the petitioner may withdraw the petition pending its clarification or the obtaining of additional data. This withdrawal will be without prejudice to a future filing. Upon refiling, the time limitation will begin to run anew from the date of refiling.

(b) At any time before the order provided for in § 121.51(k) has been forwarded to the FEDERAL REGISTER for publication, the petitioner may withdraw the petition without prejudice to a future filing. Upon refiling, the time limitation will begin to run anew.

§ 121.53 Substantive amendments to petitions.

After a petition has been filed, the petitioner may submit additional information or data in support thereof. In such cases, if the Commissioner determines that the additional information or data amounts to a substantive amendment, the petition as amended will be given a new filing date, and the time limitation will begin to run anew.

§ 121.54 Effective date.

A regulation published in accordance with § 121.51(k) shall become effective upon publication in the FEDERAL REGISTER.

§ 121.55 Objections to regulations and requests for hearings.

(a) Objections to an order promulgated pursuant to section 409(f)(1) of the act shall be submitted in quintuplicate to the Hearing Clerk of the Department at the address specified in such order. Each objection to a provision of the regulation shall be separately numbered.

(b) A statement of objections shall not be accepted for filing if:

(1) It is received for filing more than 30 days after the date of publication of the order in the FEDERAL REGISTER.

(2) It fails to establish that the objector will be adversely affected by the regulation.

(3) It does not specify with particularity the provisions of the regulation to which objection is taken.

(4) It does not state reasonable grounds for each objection raised. Grounds that it is reasonable to conclude are capable of being established by reliable evidence at the hearing, and which if proved would call for changing the provisions specified in the objections, will be deemed reasonable grounds.

(c) If the statement of objections may not be filed, the Commissioner shall inform the objector of the reasons.

(d) If objections to a regulation issued pursuant to the filing of a petition are filed by a person other than the petitioner, the Food and Drug Administration shall send a copy of the objections by certified mail to the petitioner at the address given in the petition. Petitioner shall have 2 weeks from the date of receipt by him of the objections to make written reply.

§ 121.56 Public hearing; notice.

If the objections and statements filed by any person, when they are considered with the record in the proceeding (including any reply to the objections that the petitioner may have filed), show that the person filing the objections is adversely affected and that the grounds stated in support of the objections are reasonable, and a public hearing on the objections is requested, the Commissioner shall cause to be published in the FEDERAL REGISTER a notice reciting the objections and announcing a public hearing to receive evidence on them. The notice shall designate the place where the hearing will be held, specify the time within which appearances must be filed, and specify the time (not earlier than 30 days after the date of publication of the notice in the FEDERAL REGISTER) when the hearing will commence. The hearing will convene at the place and time announced in the notice, but thereafter it may be moved to a different place and may be continued from day to day or recessed to a later day without other notice than announcement thereof by the presiding officer at the hearing. Included in such notice shall be a statement indicating whether the regulation to which objection was taken shall be stayed pending the outcome of the hearing.

§ 121.57 Presiding officer.

The hearing shall be conducted by a presiding officer, who shall be a hearing examiner appointed as provided in the Administrative Procedure Act (sec. 11, 60 Stat. 244, as amended; 5 U.S.C. 1010 et seq.) and designated by the Commissioner for conducting the hearing. Any such designation may be made or revoked by the Commissioner at any time. Hearings shall be conducted in an informal but orderly manner in accordance with the regulations in this part and the requirements of the Administrative Procedure Act. The presiding officer shall have the power to administer oaths and affirmations, to rule upon offers of proof and admissibility of evidence, to receive relevant evidence, to examine witnesses, to regulate the course of the hearing, to hold conferences for the simplification of the issues, and to dispose of procedural requests, but he shall not have power to decide any motion that involves final determination of the merits of the proceeding.

§ 121.58 Parties; burden of proof; appearances.

At the hearing, the person whose objections raised the issues to be determined shall be, within the meaning of section 7(c) of the Administrative Procedure Act, the proponent of the order sought, and accordingly shall have the burden of proof. Any interested person shall be given an opportunity to appear at the hearing, either in person or by his authorized representative, and to be heard with respect to matters relevant to the issues raised by the objections. Any interested person who desires to be heard at the hearing in person or through a representative shall, within the time specified in the notice of hearing, file with the presiding officer a written notice of appearance setting forth his name, address, and employment. If such person desires to be heard through a representative, such person or such representative shall file with the presiding officer a written appearance setting forth the name, address, and employment of such person. Any person or representative shall state with particularity in the notice of appearance his interest in the proceeding and shall set forth the specific provisions of the regulation concerning which objections have been made on which such person desires to be heard. The notice of appearance shall also set forth with particularity the position to be taken concerning the objections on which he wishes to be heard. No person shall be heard if he failed to file notice of his appearance within the time prescribed, in the absence of a clear showing of good cause why the notice of appearance was not filed. All present at the hearing shall conform to all reasonable standards of orderly and ethical conduct.

§ 121.59 Request for stay of effectiveness of regulation pending a hearing.

When a hearing is requested under § 121.55, the request may also include a request for a stay of effectiveness of the order, in whole or in part, which request shall include the reasons for the stay together with a showing that the stay involves no hazard to the public health.

§ 121.60 Prehearing and other conferences.

(a) The presiding officer, on his own motion or on the motion of any party or his representative, may direct all parties or their representatives to appear at a specific time and place for a prehearing conference to consider:

(1) The simplification of the issues.

(2) The possibility of obtaining stipulations, admissions of facts, and documents.

(3) The possibility of the limitation of the number of witnesses.

(4) The scheduling of witnesses to be called.

(5) The advance submission of all documentary evidence.

(6) Such other matters as may aid in the disposition of the proceeding.

The presiding officer shall make an order reciting the action taken at the conference, the agreements made by the parties or their representatives, and the scheduling of witnesses, and limiting the issues for hearing to those not disposed of by admissions or agreements. Such order shall control the subsequent course of the proceeding unless modified for good cause by subsequent order.

(b) The presiding officer may also direct all parties and their representatives to appear at conferences at any time during the hearing with a view to simplification, clarification, or shortening of the hearing.

§ 121.61 Submission of documents in advance of hearing.

(a) All documents to be offered at the hearing shall be submitted to the presiding officer and to the interested parties sufficiently in advance of the offer of such documents for introduction into the record to permit study and preparation of cross-examination and rebuttal evidence.

(b) The presiding officer, after consultation with the parties at a conference called in accordance with § 121.60, shall make an order specifying the time at which documents shall be submitted. He shall also specify in his order the time within which objection to the authenticity of such documents must be made to comply with paragraph (d) of this section.

(c) Documents not submitted in advance in accordance with the requirements of paragraphs (a) and (b) of this section shall not be received in evidence in the absence of a clear showing that the offering party had good cause for his failure to produce the documents sooner.

(d) The authenticity of all documents submitted in advance shall be deemed admitted unless written objection thereto is filed with the presiding officer upon notice to the other parties within the time specified by the presiding officer in accordance with paragraph (b) of this section, except that a party will be permitted to challenge such authenticity at a later time upon a clear showing of good cause for failure to have filed such written objection.

§ 121.62 Excerpts from documents.

When portions only of a document are to be relied upon, the offering party shall prepare the pertinent excerpts, adequately identified, and shall supply copies of such excerpts, together with a statement indicating the purpose for which such materials will be offered, to the presiding officer and to the other parties. Only the excerpts, so prepared and submitted, shall be received in the record. However, the whole of the original document should be made available for examination and for use by opposing counsel for purposes of cross-examination.

§ 121.63 Submission and receipt of evidence.

(a) Each witness shall, before proceeding to testify, be sworn or make affirmation.

(b) When necessary to prevent undue prolongation of the hearing, the presiding officer may limit the number of times any witness may testify, the repetitious examination and cross-examination of witnesses, or the amount of corroborative or cumulative evidence.

(c) The presiding officer shall admit only evidence which is relevant, material, and not unduly repetitious.

(d) Opinion evidence shall be admitted when the presiding officer is satisfied that the witness is properly qualified.

(e) The presiding officer shall file as an exhibit a copy of the FEDERAL REGISTER promulgating the regulation to which objections were taken and the objections that form the basis for the hearing. All documents constituting the record bearing on the point in controversy, and not entitled to protection under section 301(j) of the act, accumulated up to the start of the hearing shall be open for inspection by interested persons during office hours in the office of the Hearing Clerk of the Department, Room 5440, 330 Independence Avenue SW., Washington 25, D.C.

(f) If any person objects to the admission or rejection of any evidence or to other limitation of the scope of any examination or cross-examination, he shall state briefly the grounds for such objection, and the transcript shall not include extended argument or debate thereon except as ordered by the presiding officer. A ruling of the presiding officer on any such objection shall be a part of the transcript, together with such offer of proof as has been made.

§ 121.64 Transcript of the testimony.

Testimony given at a public hearing shall be reported verbatim. All written statements, charts, tabulations, and similar data offered in evidence at the hearing shall be marked for identification and, upon a showing satisfactory to the presiding officer of their authenticity, relevancy, and materiality, shall be received in evidence subject to the Administrative Procedure Act (sec. 7(c), 60 Stat. 238; 5 U.S.C. 1006(c)). Exhibits shall if practicable, be submitted in quintuplicate. In case the required number of copies are not made available, the presiding officer shall exercise his discretion in determining whether said exhibit shall be read in evidence or whether additional copies shall be required to be submitted within a time to be specified by the presiding officer. Where the testimony of a witness refers to a statute, or to a report or document, the presiding officer shall, after inquiry relating to the identification of such statute, report, or document, determine whether the same shall be produced at the hearing and physically be made a part of the evidence by reference. Where relevant and material matter offered in evidence is embraced in a report or document containing immaterial and irrelevant matter, such immaterial and irrelevant matter shall be excluded and shall be segregated insofar as practicable, subject to the direction of the presiding officer.

§ 121.65 Oral and written arguments.

(a) Unless the presiding officer issues an announcement at the hearing authorizing oral argument before him, it shall not be permitted.

(b) The presiding officer shall announce at the hearing a reasonable period within which interested persons may file written arguments based solely upon the evidence received at the hearing, citing the pages of the transcript of the testimony or properly identified exhibits where such evidence occurs.

§ 121.66 Indexing of record.

(a) Whenever it appears to the presiding officer that the record of hearing will be of such length that an index to the record will permit a more orderly analysis of the evidence and reduce delay, the presiding officer shall require counsel for the parties to prepare a daily topical index, which will be available to the presiding officer and all parties. Preparation of such an index shall be apportioned among all counsel present in such manner as appears just and proper in the circumstances.

(b) The index shall include each topic of testimony upon which evidence is taken, the name of each witness testifying upon the topic, the page of the record at which each portion of his testimony appeared, and the number of each exhibit relating to the topic. The index shall also contain the name of each witness, followed by the topics upon which he testified and the page of the record at which such testimony appears.

§ 121.67 Certification of record.

At the close of the hearing, the presiding officer shall afford witnesses and their counsel a short time (not longer than 30 days, except in unusual cases) in which to point out errors that may have been made in transcribing the testimony. The presiding officer shall promptly thereafter order such corrections made as in his judgment are required to make the transcript conform to the testimony, and he shall certify the transcript of testimony and the exhibits to the Commissioner.

§ 121.68 Filing the record of the hearing.

As soon as practicable after the close of the hearing, the complete record of the hearing shall be filed in the office of the Hearing Clerk. The record shall include the transcript of the testimony, all exhibits, and any written arguments that may have been filed.

§ 121.69 Copies of the record of the hearing.

The Department will make provision for a stenographic record of the testimony and for such copies of the transcript thereof as it requires for its own purposes. Any person desiring a copy of the record of the hearing or of any part thereof shall be entitled to the same upon payment of the costs thereof.

§ 121.70 Proposed order after public hearing.

As soon as practicable after the time for filing written arguments has ended, the Commissioner shall prepare and cause to be published in the FEDERAL REGISTER a proposed order which shall set forth in detail the findings of fact and conclusions, and recommend decision on the objections that were the subject of the hearing and tentative regulations. The proposed order shall specify a reasonable time, ordinarily not to exceed 60 days, within which any interested person may file exceptions. The exceptions shall point out with particularity the alleged errors in said proposed order and shall contain a specific reference to the pages of the transcript of the testimony or to the exhibits on which each exception is based. Such exceptions may be accompanied by a memorandum or brief.

§ 121.71 Final order after public hearing.

As soon as practicable after the time for filing exceptions has passed, the record and the exceptions shall be presented to the Secretary and he shall cause to be published in the FEDERAL REGISTER his final order promulgating the regulation, which shall specify the date on which the order shall take effect.

§ 121.72 Adoption of regulation on initiative of Commissioner.

(a) The Commissioner upon his own initiative may propose the issuance of a regulation prescribing, with respect to any particular use of a food additive, the conditions under which such additive may be safely used. Notice of such proposal shall be published in the FEDERAL REGISTER and shall state the reasons for the proposal.

(b) Action upon a proposal made by the Commissioner shall, after publication of the notice, proceed as provided in § 121.51 and section 409 of the act.

§ 121.73 Judicial review.

The Secretary of Health, Education, and Welfare hereby designates the Assistant General Counsel for Food and Drugs of the Department of Health, Education, and Welfare as the officer upon whom copy of petition for judicial review shall be served. Such officer shall be responsible for filing in the court a transcript of proceedings and the record on which the order of the Secretary of Health, Education, and Welfare is based. The transcript and record shall be certified by the Secretary.

§ 121.74 Procedure for amending and repealing tolerances or exemptions from tolerances.

(a) The Commissioner or any interested person may propose the issuance of a regulation amending or repealing a regulation pertaining to a food additive or granting or repealing an exemption for such additive. Such a proposal by an interested person shall be in writing. If such proposal by an interested person furnishes reasonable grounds therefor, the Commissioner will publish a notice announcing the proposal. Proposals initiated by the Commissioner will likewise be published. Following such publication, the proceedings shall be the same as prescribed by section 409 of the act and the regulations in this part for the promulgation of a regulation.

(b) "Reasonable grounds" shall include an explanation showing wherein the person has a substantial interest in such regulation and an assertion of facts (supported by data if available) showing that new information exists with respect to the food additive or that new uses have been developed or old uses abandoned, that new data are available as to toxicity of the chemical, or that experience with the existing regulation or exemption may justify its amendment or repeal. New data should be furnished in the form specified in § 121.51 for submitting petitions.

§ 121.75 Exemption for investigational use.

A food additive, or a food containing such an additive intended for investigational use by qualified experts, shall be exempt from the requirements of section 409 of the act: *Provided*, That the food additive or the food containing the additive bears a label which states prominently "Caution—Contains new food additive—For investigational use only. Not to be used for human food or food for other than laboratory animals."

§ 121.84 Further extension of effective date of statute for certain specified food additives.

(a) All extensions of the effective date of section 409 of the act (as amended by Public Law 88–625) are limited to those additives listed in § 121.90 for direct additives and § 121.91 for indirect additives. Public Law 88–625 provides that a food additive previously granted an extension to June 30, 1964, may be further extended but not beyond December 31, 1965, provided that the applicable findings required by the statute can be made. Extensions may be made beyond June 30, 1964, on food additives meeting the requirements of this section, provided that the following data are submitted:

(1) The specific name (not trade name) or chemical designation of the substance involved, the specific use or uses for which an extension is desired, and the amount and purpose of the substance involved in each such usage.

(2) A statement detailing actions taken and dates thereof to determine the applicability of the food additives amendment to such use or uses or to develop the scientific data necessary for action, together with the results of such actions to date.

(3) A statement outlining additional work in progress, detailing its nature, when started, by whom it is being conducted, and the results to date.

(4) A statement of the amount of time for which further extension is needed. (Include only the time expected to be needed to determine that the substance is not a food additive or to submit a petition for an appropriate regulation to the Food and Drug Administration. Do not include any estimated time for processing a petition by the Food and Drug Administration.)

(b) Requests for extension may be submitted by any interested person who has the necessary facts, whether or not he obtained or requested the extension previously.

(c) Current extensions will be limited to a time period not exceeding June 30, 1965, but these may be reextended to December 31, 1965, upon request made prior to June 30, 1965, if a progress report as of June 30, 1965, accompanies the request, and if all relevant facts justify such reextension.

(d) If any of the information described in this section is included in petitions for food additive regulations or applications for extensions already submitted to the Commissioner, this information may be incorporated by reference.

(e) Decisions on requests for further extensions, including the amount of time for which each extension is granted, will be published in the FEDERAL REGISTER. All requests for extensions should be addressed to the Petitions Control Branch, Food and Drug Administration, Washington, D.C., 20204.

§ 121.89 Substances refused extension of time for compliance.

On the basis of data before him, the Commissioner cannot find that there is no undue risk to the public health in extending the effective date of the Food Additives Amendment of 1958 as it applies to safrole, oil of sassafras, dihydrosafrole, and iso-safrole. The requests for extensions are denied, and any prior sanction or approval of the use of these articles in food is hereby canceled.

§ 121.90 Further extensions of effective date of statute for certain food additives as direct additives to food.

On the basis of data supplied following enactment of Public Law 88–625 (78 Stat. 1002; 21 U.S.C. 342, note), and consistent with the provisions of that statute and the policy prescribed in § 121.84, and findings that no undue risk to the public health is involved in the interim use of the following food additives, the food additives listed may be used in foods, in accordance with good manufacturing practice, under the specified use conditions until December 31, 1965, or until regulations shall have been issued establishing or denying tolerances or exemptions from the requirements of tolerances, in accordance with section 409 of the act, whichever occurs first:

MISCELLANEOUS

Product	*Specified uses or restrictions*
Alkyl (C_8–C_{12}) phenolethylene oxide (4 to 15) and (30 to 50) condensation products.	Spray adjuvant on fresh fruits and vegetables; limit 1 p.p.m. in food.
1,1-*Bis*(*p*-chlorophenyl)-2,2,2-trichloroethanol ----------	From use on fresh mint leaves for control of mites; limit 100 p.p.m. as residue in mint oil.
Bromide, inorganic ----------------------------------	Resulting from fumigation with methyl bromide and/or ethylene dibromide, to control pest infestations; limit 50 p.p.m. in processed food.
Petroleum hydrocarbon resin, aliphatic (mol. wt. approx. 1100).	Component of chewing gum base.
Polyglyceryl phthalate ester of edible coconut oil fatty acids diluted with ethylene dichloride.	Spray adjuvant on fruits and vegetables; limit 1 p.p.m. of ester.
Polyoxyethylated dodecyl-, nonyl-, and octylphenol (mol. wt. 426–1184).	Surface active agent in commercial detergents for raw products; use of detergent followed by water rinse.

MISCELLANEOUS

Product	*Specified uses or restrictions*
Sodium 2-ethyl-1-hexylsulfate	In solutions for peeling fruits and vegetables; use followed by water rinse.

FLAVORING SUBSTANCES AND NATURAL SUBSTANCES USED IN CONJUNCTION WITH FLAVORS

Product	*Specified uses or restrictions*
Aloe and aloe extract; *Aloe perryi* Baker, *A. barbadensis* Mill., *A. ferox* Mill., and hybrids of this species with *A. africana* Mill., and *A. spicata* Baker.	In alcoholic beverages only.
Aloe, cape; *Aloe ferox* Mill., and its hybrids with *A. africana* Mill., and *A. spicata* Baker.	Do.
Aloin; *Aloe perryi* Baker, *A. barbadensis* Mill., *A. ferox* Mill., and hybrids of this species with *A. africana* Mill., and *A. spicata* Baker.	Do.
Angola weed; *Roccella fuciformis* Ach.	Do.
Boldus (boldo leaves); *Peumus boldus* Mol.	Do.
Bryonia (bryony); *Bryonia alba* L.	Do.
Calamus (sweetflag) and calamus oil; *Acorus calamus* L.	Do.
Cassia fistula (goldenshower senna); *Cassia fistula* L.	Do.
Chestnut leaves, leaves extract, and leaves extract, solid; *Castanea dentata* (Marsh.) Borkh.	
Cocillana bark; *Guarea rusbyi* (Britt.) Rusby	Do.
Damiana leaves; *Turnera diffusa* Willd.	
Forgetmenot; *Myosotis* spp.	Do.
Hart's-tongue; *Phyllitis scolopendrium* (L.) Newm.	Do.
Lungmoss (lungwort); *Sticta pulmonaria* Ach.	Do.
Meadowsweet, European (*Spirea ulmaria*); *Filipendula ulmaria* (L.) Maxim.	Do.
Melilot herb (yellow melilot); *Melilotus officinalis* (L.) Lam.	Do.
Opopanax (bisabol-myrrh) gum and oil; *Opopanax chironium* Koch (true opopanax), or *Commiphora erythraea* Eng., var. *glabrescens*.	
Passion flower herb extract; *Passiflora incarnata* L.	
Quillaia extract (soapbark extract, China bark extract). *Quillaja saponaria* Molina.	Do.
Red saunders (red sandalwood); *Pterocarpus santalinus*, L. f.	Do.
Stargrass (starwort); *Aletris farinosa* L.	Do.
Tansy flowers and oil; *Tanacetum vulgare* L.	Thujone free. In alcoholic beverages only.
Tansy flowers extract and extract, solid; *Tanacetum vulgare* L.	Do.
Walnut hull, extract; walnut leaves, extract; walnut husks; and walnuts, green; *Juglans* spp.	In alcoholic beverages only.

SYNTHETIC FLAVORING SUBSTANCES AND ADJUVANTS

Product	*Specified uses or restrictions*
Acetophenone (phenyl methyl ketone)	
Allyl butyrate	
Allyl caproate (2-propenyl hexanoate, allyl hexanoate).	
Allyl heptylate (allyl heptoate, allyl oenanthate, allyl heptanoate).	
Beechwood creosote, *Fagus* spp.	
Benzyl disulfide	
Benzyl isoeugenol (isoeugenol benzyl ether, 1-benzyloxy-2-methoxy-4-propenyl benzene).	
Cade oil (juniper tar, empyreumatic wood oil); *Juniperus oxycedrus* L.	
Caryophyllene acetate	
Caryophyllene alcohol	
Cedarwood oil terpenes	
Cedarwood oil alcohols	
Cinnamyl benzoate	
Dihydrocoumarin (benzodihydropyrone)	
Ethyl brassylate	
Ethyl crotonate	
Ethyl undecylate	
Eugenyl acetate (acetyl eugenol)	
Furfural	
Furfuryl mercaptan	
Guaiacyl acetate	
Guaiene	
Guaiyl acetate	
Heptylidene acetone	
Isojasmone	
Linalyl cinnamate	
Methoxy styryl isopropyl ketone	
6-Methyl coumarin	
6-Methyl furfural	
Methyl furoate	
3-Methyl-5-propyl-cyclohex-2-enone	
β-Naphthyl ethyl ether (nerolin, ethyl-2-naphthyl ether).	
β-Naphthyl methyl ether (yara-yara)	
Propylidene phthalide	
Styrene	
Thiophenol	
Undecylenic alcohol	

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§ 121.91 Further extensions of effective date of statute for certain food additives as indirect additives to food.

On the basis of data supplied following enactment of Public Law 88-625 (78 Stat. 1002; 21 U.S.C. 342, note), and consistent with the provisions of that statute and the policy prescribed in § 121.84, and findings that no undue risk to the public health is involved in the interim use of the following food additives, the food additives listed may be used in connection with the production, packaging, and storage of food products, in accordance with good manufacturing practice, under the specified use conditions until December 31, 1965, or until regulations shall have been issued establishing or denying tolerances or exemptions from the requirements of tolerances, in accordance with section 409 of the act, whichever occurs first:

Product	*Specified uses or restrictions*
Alkyl (C_8–C_{18}) phenolethylene oxide (4 to 15) and (30 to 50) condensation product, phosphate ester.	Component of food-packaging materials.
Alkyl (C_8–C_{18}) phenolethylene oxide condensation products (4 to 15) and (30 to 50).	Do.
Allethrin	Component of insecticide for control of infestation in food-storage and food-processing areas; limit 2 p.p.m. on food.
Anhydroformaldehyde aniline resin	Component of phenolic molding compound for use in processing, holding, packaging, or transporting food.
Asbestos fiber	Do.
Barium hydroxide	Do.

Product	Specified uses or restrictions
Glyoxal	As an insolubilizing agent for starch or protein in coatings for paper and paperboard in food packaging; limit 10% of the weight of starch or protein fraction of the binder system.
Hexamethylenetetramine	Component of phenolic molding compound for use in processing, holding, packaging, or transporting food.
Mineral oil consisting of virgin petroleum distillates refined to meet the following ultraviolet absorbance limits as determined by analytical methods available on request from the Commissioner of Food and Drugs: *Wavelength* — *Maximum absorbance per cm. optical pathlength* 280–299 mμ — 1.0 300–359 mμ — .8 360–400 mμ — .1	For uses wherever mineral oil is permitted for use as a component of nonfood articles complying with §§ 121.2519, 121.2520, 121.2531 (for use only in rolling of metallic foil and sheet stock), 121.2535, 121.2536, 121.2557, and 121.2562.
Mineral oil meeting the following specifications: Virgin distillate from petroleum; no cracked products present; distillation endpoint at 760 mm. not to exceed 700° F. with residue not to exceed 2% as determined by ASTM Method D–86–IP–123.	Component of burlap bags for packaging dry food.
N-Octylbicycloheptene dicarboximide	Component of insecticide for control of infestation in food-storage and food-processing areas; limit 20 p.p.m. in food.
Oxalic acid	Component of phenolic molding compound for use in processing, holding, packaging, or transporting food.
Petroleum hydrocarbons, aliphatic: Initial boiling point 315° F. minimum; final boiling point 650° F. maximum; ultraviolet absorptivity 0.04 liter per gram centimeter maximum at 290 millimicrons.	Adjuvant for insecticides in food-processing plants; limit 1 p.p.m. residue on foods.
Petroleum polymerization resins obtained from the polymerization of dienes and olefins from low-boiling petroleum stocks.	Component of coating of paper and paperboard for food packaging.
p-Phenylethyl phenol	Component of phenolic molding compound for use in processing, holding, packaging, or transporting food.
Pigment blue 15 (phthalocyanine blue), Color Index No. 74160.	Colorant in food containers and equipment.
Pigment green 7 (phthalocyanine green), Color Index No. 74260.	Do.
Pigment green 17 (chromium oxide green), Color Index No. 77288.	Do.
Pigment orange 13 (benzidine orange), Color Index No. 21110.	Do.
Pigment red 48 (red 2B, rubine red), Color Index No. 15865.	Do.
Pigment violet 19 (quinacridone red), Color Index No. 46500.	Colorant for polyethylene in food packaging.
Pigment white 21 (barium sulfate), Color Index No. 77120.	Colorant in food containers and equipment.
Pigment yellow 12 (benzidine yellow), Color Index No. 21090.	Do.
Pigment yellow 14 (benzidine yellow OT), Color Index No. 21095.	Coloring in polyethylene for food packaging.
Pigment yellow 17 (benzidine yellow), Color Index No. 21105.	Colorant in food containers and equipment.
Piperonyl butoxide	Component of insecticide for control of infestation in food-storage and food-processing areas; limit 20 p.p.m. in food.
Polyoxyethylene (4) lauryl alcohol ether	Component of food-packaging materials.
Polyoxypropylene-polyoxyethylene block polymers (molecular weight 3200 to 3620).	As a plasticizer in coatings to be applied to paper and paperboard for food packaging.
Pyrethrins	Component of insecticide for control of infestation in food-storage and food-processing areas; limit 3 p.p.m. in food.
Resinous and polymeric substances prepared from optional substances as identified in § 121.2514.	Continuous film on the food-contact surface of a nonmetallic article used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food.
Rosin partially dimerized by zinc chloride catalyst to a drop-softening point of 105° C.–120° C., and a color of N or paler.	As a component of coatings for food packaging.
Sodium nonylphenoxypolyethoxy (4 moles) sulfate	Emulsifier in coatings of paper and paperboard for food packaging.
Terpene resin produced by polymerization of α- and β-pinene and related terpenes.	Component of sizing agents, coatings, and adhesives used in food packaging.

Subpart B—Exemption of Certain Food Additives From the Requirement of Tolerances

§ 121.101 Substances that are generally recognized as safe.

(a) It is impracticable to list all substances that are generally recognized as safe for their intended use. However, by way of illustration, the Commissioner regards such common food ingredients as salt, pepper, sugar, vinegar, baking powder, and monosodium glutamate as safe for their intended use. The lists in paragraph (d) of this section include additional substances that, when used for the purposes indicated, in accordance with good manufacturing practice, are regarded by the Commissioner as generally recognized as safe for such uses.

(b) For the purposes of this section, good manufacturing practice shall be defined to include the following restrictions:

(1) The quantity of a substance added to food does not exceed the amount reasonably required to accomplish its intended physical, nutritional, or other technical effect in food; and

(2) The quantity of a substance that becomes a component of food as a result of its use in the manufacturing, processing, or packaging of food, and which is not intended to accomplish any physical or other technical effect in the food itself, shall be reduced to the extent reasonably possible.

(3) The substance is of appropriate food grade and is prepared and handled as a food ingredient. Upon request the Commissioner will offer an opinion, based on specifications and intended use, as to whether or not a particular grade or lot of the substance is of suitable purity for use in food and would generally be regarded as safe for the purpose intended, by experts qualified to evaluate its safety.

(c) The inclusion of substances in the list of nutrients does not constitute a finding on the part of the Department that the substance is useful as a supplement to the diet for humans.

(d) Substances that are generally recognized as safe for their intended use within the meaning of section 409 of the act are as follows:

Product	Tolerance	Limitations or restrictions
(1) ANTICAKING AGENTS		
Aluminum calcium silicate	2 percent	In table salt.
Calcium silicate	5 percent	In baking powder.
Calcium silicate	2 percent	In table salt.
Magnesium silicate	do	Do.
*Sodium aluminosilicate (sodium silicoaluminate).	do	
*Sodium calcium aluminosilicate, hydrated (sodium calcium silicoaluminate).	do	
Tricalcium silicate	do	Do.
(2) CHEMICAL PRESERVATIVES		
Ascorbic acid		
Ascorbyl palmitate		
Benzoic acid	0.1 percent.	
Butylated hydroxyanisole	Total content of antioxidants not over 0.02 percent of fat or oil content, including essential (volatile) oil content of food.	
Butylated hydroxytoluene	do	
Calcium ascorbate		
Calcium propionate		
*Calcium sorbate		
Caprylic acid		In cheese wraps.
Dilauryl thiodipropionate	Total content of antioxidants not over 0.02 percent of fat or oil content, including essential (volatile) oil content of the food.	
Erythorbic acid		
Gum guaiac	0.1 percent (equivalent antioxidant activity 0.01 percent).	In edible fats or oils.
*Methylparaben (methyl-p-hydroxybenzoate).	0.1 percent	
Nordihydroguaiaretic acid	Total content of antioxidants not over 0.02 percent of fat or oil content including essential (volatile) oil content of the food.	
Potassium bisulfite		Not in meats or in food recognized as source of vitamin B_1.
Potassium metabisulfite		Do.
Potassium sorbate		
Propionic acid		
Propyl gallate	Total content of antioxidants not over 0.02 percent of fat or oil content, including essential (volatile) oil content of the food.	
*Propylparaben (propyl p-hydroxybenzoate).	0.1 percent	
Sodium ascorbate		
Sodium benzoate	0.1 percent	
Sodium bisulfite		Do.
Sodium metabisulfite		Do.
Sodium propionate		
Sodium sorbate		
Sodium sulfite		Do.
Sorbic acid		
*Stannous chloride	0.0015 percent calculated as tin	
Sulfur dioxide		Do.
Thiodipropionic acid	Total content of antioxidants not over 0.02 percent of fat or oil content, including essential (volatile) oil content of the food.	
Tocopherols		
(3) EMULSIFYING AGENTS		
Cholic acid	0.1 percent	Dried egg whites.
Desoxycholic acid	do	Do.
Diacetyl tartaric acid esters of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids.		
Glycocholic acid	0.1 percent	Do.
(3) EMULSIFYING AGENTS—con.		
Mono- and diglycerides of edible fats or oils, or edible fat-forming acids.		
Monosodium phosphate derivatives of mono- and diglycerides of edible fats or oils, or edible fat-forming fatty acids.		
Propylene glycol		
Ox bile extract	0.1 percent	Do.
Taurocholic acid (or its sodium salt)	do	Do.
(4) NONNUTRITIVE SWEETENERS		
*Ammonium saccharin		
Calcium cyclamate (calcium cyclohexyl sulfamate).		
Calcium saccharin		
*Magnesium cyclamate (magnesium cyclohexyl sulfamate).		
*Potassium cyclamate (potassium cyclohexyl sulfamate).		
Saccharin		
Sodium cyclamate (sodium cyclohexyl sulfamate).		
Sodium saccharin		
(5) NUTRIENTS AND/OR DIETARY SUPPLEMENTS[1]		
*Alanine (L- and DL-forms)		
*Arginine (L- and DL-forms)		
Ascorbic acid		
*Aspartic acid (L- and DL-forms)		
*Biotin		
Calcium carbonate		
*Calcium citrate		
*Calcium glycerophosphate		
Calcium oxide		
Calcium pantothenate		
Calcium phosphate (mono-, di-, tribasic).		
*Calcium pyrophosphate		
Calcium sulfate		
Carotene		
*Choline bitartrate		
*Choline chloride		
Copper gluconate	0.005 percent	
Cuprous iodide	0.01 percent	In table salt as a source of dietary iodine.
*Cysteine (L- form)		
*Cystine (L- and DL- forms)		
Ferric phosphate		
Ferric pyrophosphate		
Ferric sodium pyrophosphate		
*Ferrous gluconate		
*Ferrous lactate		
Ferrous sulfate		
*Glycine (aminoacetic acid)		In animal feeds.
*Histidine (L- and DL- forms)		
*Inositol		
Iron, reduced		
*Isoleucine (L- and DL-forms)		
*Leucine (L- and DL-forms)		
*Linoleic acid (prepared from edible fats and oils and free from chick-edema factor).		
Lysine (L- and DL-forms)		
*Magnesium oxide		
*Magnesium phosphate (di-, tribasic)		
*Magnesium sulfate		
*Manganese chloride		
*Manganese citrate		
*Manganese gluconate		
*Manganese glycerophosphate		
*Manganese hypophosphite		
*Manganese sulfate		
*Manganous oxide		
*Mannitol	5 percent	In special dietary foods.

***Substances added from February 2 and August 4, 1960, proposed lists.**

[1] Amino acids listed may be free, hydrochloride salt, hydrated, or anhydrous form, where applicable.

Product	Tolerance	Limitations or restrictions
(6) NUTRIENTS AND/OR DIETARY SUPPLEMENTS [1]—con.		
*Methionine		Animal feeds.
*Methionine hydroxy analog and its calcium salts.		Do.
Niacin		
Niacinamide		
D-Pantothenyl alcohol		
*Phenylalanine (L- and DL-forms)		
Potassium chloride		
*Potassium glycerophosphate		
Potassium iodide	0.01 percent	In table salt as a source of dietary iodine.
*Proline (L- and DL-forms)		
Pyridoxine hydrochloride		
Riboflavin		
Riboflavin-5-phosphate		
*Serine (L- and DL-forms)		
Sodium pantothenate		
Sodium phosphate (mono-, di-, tribasic).		
Sorbitol	7 percent	In foods for special dietary use.
Thiamine hydrochloride		
Thiamine mononitrate		
*Threonine (L- and DL-forms)		
Tocopherols		
a-Tocopherol acetate		
*Tryptophane (L- and DL-forms)		
*Tyrosine (L- and DL- forms)		
*Valine (L- and DL-forms)		
Vitamin A		
Vitamin A acetate		
Vitamin A palmitate		
Vitamin B_{12}		
Vitamin D_2		
Vitamin D_3		
*Zinc sulfate		
*Zinc gluconate		
*Zinc chloride		
*Zinc oxide		
*Zinc stearate (prepared from stearic acid free from chickedema factor).		
(6) SEQUESTRANTS [2]		
Calcium acetate		
Calcium chloride		
Calcium citrate		
Calcium diacetate		
Calcium gluconate		
Calcium hexametaphosphate		
Calcium phosphate, monobasic		
Calcium phytate		
Citric acid		
Dipotassium phosphate		
Disodium phosphate		
Isopropyl citrate	0.02 percent	
Monoisopropyl citrate		
Potassium citrate		
Sodium acid phosphate		
Sodium citrate		
Sodium diacetate		
Sodium gluconate		
Sodium hexametaphosphate		
Sodium metaphosphate		
Sodium phosphate (mono-, di-, tribasic).		
Sodium potassium tartrate		
Sodium pyrophosphate		
Sodium pyrophosphate, tetra		
Sodium tartrate		
Sodium thiosulfate	0.1 percent	In salt.
Sodium tripolyphosphate		
Stearyl citrate	0.15 percent	
Tartaric acid		
(7) STABILIZERS		
*Acacia (gum arabic)		
Agar-agar		
*Ammonium alginate		
*Calcium alginate		
Carob bean gum (locust bean gum)		
Chondrus extract (carrageenin)		
*Ghatti gum		
Guar gum		
*Potassium alginate		
*Sodium alginate		
*Sterculia gum (karaya gum)		
*Tragacanth (gum tragacanth)		
(8) MISCELLANEOUS AND/OR GENERAL PURPOSE FOOD ADDITIVES		
Acetic acid		
*Adipic acid		Buffer and neutralizing agent.
Aluminum ammonium sulfate		
Aluminum potassium sulfate		
Aluminum sodium sulfate		
Aluminum sulfate		
Ammonium bicarbonate		
Ammonium carbonate		
Ammonium hydroxide		
Ammonium phosphate (mono- and dibasic).		
*Ammonium sulfate		
*Beeswax (yellow wax)		
*Beeswax, bleached (white wax)		
*Bentonite		
Butane		
Caffeine	0.02 percent	In cola-type beverages.
Calcium carbonate		
Calcium chloride		
Calcium citrate		
Calcium gluconate		
Calcium hydroxide		
Calcium lactate		
Calcium oxide		
Calcium phosphate (mono-, di-, tribasic).		
Caramel		
Carbon dioxide		
Carnauba wax		
Citric acid		
*Dextrans (of average molecular weight below 100,000).		
Ethyl formate	0.0015 percent	As fumigant for cashew nuts.
*Glutamic acid		Salt substitute.
*Glutamic acid hydrochloride		Do.
Glycerin		
Glyceryl monostearate		
Helium		
*Hydrochloric acid		Buffer and neutralizing agent.
*Hydrogen peroxide		Bleaching agent.
Lactic acid		
*Lecithin		
Magnesium carbonate		
Magnesium hydroxide		
Magnesium oxide		
Magnesium stearate		As migratory substance from packaging materials when used as a stabilizer.
*Malic acid		
*Methylcellulose (U.S.P. methylcellulose, except that the methoxy content shall not be less than 27.5 percent and not more than 31.5 percent on a dry-weight basis).		
Monoammonium glutamate		
*Monopotassium glutamate		
Nitrogen		
*Nitrous oxide		Propellant for certain dairy and vegetable-fat toppings in pressurized containers.
Papain		

*Substances added from February 2 and August 4, 1960, proposed lists.

[2] For the purpose of this list, no attempt has been made to designate those sequestrants that may also function as chemical preservatives.

Product	Tolerance	Limitations or restrictions
(8) MISCELLANEOUS AND/OR GENERAL PURPOSE FOOD ADDITIVES—con.		
Phosphoric acid		
Potassium acid tartrate		
Potassium bicarbonate		
Potassium carbonate		
Potassium citrate		
Potassium hydroxide		
*Potassium sulfate		
Propane		
Propylene glycol		
*Rennet (rennin)		
*Silica aerogel (finely powdered microcellular silica foam having a minimum silica content of 89.5 percent).		Component of anti-foaming agent.
Sodium acetate		
Sodium acid pyrophosphate		
Sodium aluminum phosphate		
Sodium bicarbonate		
Sodium carbonate		
Sodium citrate		
*Sodium carboxymethylcellulose (the sodium salt of carboxymethylcellulose not less than 99.5 percent on a dry-weight basis, with maximum substitution of 0.95 carboxymethyl groups per anhydroglucose unit, and with a minimum viscosity of 25 centipoises for 25 percent by weight aqueous solution at 25° C.).		
*Sodium caseinate		
Sodium citrate		
Sodium hydroxide		
*Sodium pectinate		
Sodium phosphate (mono-, di-, tribasic).		
Sodium potassium tartrate		
Sodium sesquicarbonate		
Sodium tripolyphosphate		
*Succinic acid		
Sulfuric acid		
Tartaric acid		
Triacetin (glyceryl triacetate)		
Triethyl citrate	0.25 percent	Dried egg whites.

*Substances added from February 2 and August 4, 1960, proposed lists.

(e) Spices, seasonings, essential oils, oleoresins, and natural extractives that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

(1) SPICES AND OTHER NATURAL SEASONINGS AND FLAVORINGS (LEAVES, ROOTS, BARKS, BERRIES, ETC.)

Common name	*Botanical name of plant source*
Alfalfa herb and seed	Medicago sativa L.
Allspice	Pimenta officinalis Lindl.
Ambrette seed	Hibiscus abelmoschus L.
Angelica	Angelica archangelica L. or other spp. of Angelica.
Angelica root	Do.
Angelica seed	Do.
Angostura (cusparia bark)	Galipea officinalis Hancock.
Anise	Pimpinella anisum L.
Anise, star	Illicium verum Hook. f.
Balm (lemon balm)	Melissa officinalis L.
Basil, bush	Ocimum minimum L.
Basil, sweet	Ocimum basilicum L.
Bay	Laurus nobilis L.
Calendula	Calendula officinalis L.
Camomile (chamomile), English or Roman.	Anthemis nobilis L.
Camomile (chamomile), German or Hungarian.	Matricaria chamomilla L.
Capers	Capparis spinosa L.
Capsicum	Capsicum frutescens L. or Capsicum annuum L.
Caraway	Carum carvi L.
Caraway, black (black cumin)	Nigella sativa L.
Cardamom (cardamon)	Elettaria cardamomum Maton.
Cassia, Chinese	Cinnamomum cassia Blume.
Cassia, Padang or Batavia	Cinnamomum burmanni Blume.
Cassia, Saigon	Cinnamomum loureirii Nees.
Cayenne pepper	Capsicum frutescens L. or Capsicum annuum L.
Celery seed	Apium graveolens L.
Chervil	Anthriscus cerefolium (L.) Hoffm.
Chives	Allium schoenoprasum L.
Cinnamon, Ceylon	Cinnamomum zeylanicum Nees.
Cinnamon, Chinese	Cinnamomum cassia Blume.
Cinnamon, Saigon	Cinnamomum loureirii Nees.
Clary (clary sage)	Salvia sclarea L.
Clover	Trifolium spp.
Cloves	Eugenia caryophyllata Thunb.
Coriander	Coriandrum sativum L.
Cumin (cummin)	Cuminum cyminum L.
Cumin, black (black caraway)	Nigella sativa L.
Dill	Anethum graveolens L.
Elder flowers	Sambucus canadensis L.
Fennel, common	Foeniculum vulgare Mill.
Fennel, sweet (finocchio, Florence fennel).	Foeniculum vulgare Mill. var. dulce (DC.) Alef.
Fenugreek	Trigonella foenum-graecum L.
Galanga (galangal)	Alpinia officinarum Hance.
Garlic	Allium sativum L.
Geranium	Pelargonium spp.
Ginger	Zingiber officinale Rosc.
Glycyrrhiza	Glycyrrhiza glabra L. and other spp. of Glycyrrhiza.
Grains of paradise	Amomum melegueta Rosc.
Horehound (hoarhound)	Marrubium vulgare L.
Horseradish	Armoracia lapathifolia Gilib.
Hyssop	Hyssopus officinalis L.
Lavender	Lavandula officinalis Chaix.
Licorice	Glycyrrhiza glabra L. and other spp. of Glycyrrhiza.
Linden flowers	Tilia spp.
Mace	Myristica fragrans Houtt.
Marigold, pot	Calendula officinalis L.
Marjoram, pot	Majorana onites (L.) Benth.
Marjoram, sweet	Majorana hortensis Moench.
Mustard, black or brown	Brassica nigra (L.) Koch.
Mustard, brown	Brassica juncea (L.) Coss.
Mustard, white or yellow	Brassica hirta Moench.
Nutmeg	Myristica fragrans Houtt.
Oregano (oreganum, Mexican oregano, Mexican sage, origan).	Lippia spp.
Paprika	Capsicum annuum L.
Parsley	Petroselinum crispum (Mill.) Mansf.
Pepper, black	Piper nigrum L.
Pepper, cayenne	Capsicum frutescens L. or Capsicum annuum L.
Pepper, red	Do.
Pepper, white	Piper nigrum L.

(1) SPICES AND OTHER NATURAL SEASONINGS AND FLAVORINGS (LEAVES, ROOTS, BARKS, BERRIES, ETC.)—Continued

Common name	*Botanical name of plant source*
Peppermint	Mentha piperita L.
Poppy seed	Papaver somniferum L.
Pot marigold	Calendula officinalis L.
Pot marjoram	Majorana onites (L.) Benth.
Rosemary	Rosmarinus officinalis L.
Rue	Ruta graveolens L.
Saffron	Crocus sativus L.
Sage	Salvia officinalis L.
Sage, Greek	Salvia triloba L.
Savory, summer	Satureia hortensis L. (Satureja).
Savory, winter	Satureia montana L. (Satureja).
Sesame	Sesamum indicum L.
Spearmint	Mentha spicata L.
Star anise	Illicium verum Hook. f.
Tarragon	Artemisia dracunculus L.
Thyme	Thymus vulgaris L.
Thyme, wild or creeping	Thymus serpyllum L.
Turmeric	Curcuma longa L.
Vanilla	Vanilla planifolia Andr. or Vanilla tahitensis J. W. Moore
Zedoary	Curcuma zedoaria Rosc.

(2) ESSENTIAL OILS, OLEORESINS (SOLVENT-FREE), AND NATURAL EXTRACTIVES (INCLUDING DISTILLATES)

Common name	*Botanical name of plant source*
Alfalfa	Medicago sativa L.
Allspice	Pimenta officinalis Lindl.
Almond, bitter (free from prussic acid)	Prunus amygdalus Batsch, Prunus armeniaca L., or Prunus persica (L.) Batsch.
Ambrette (seed)	Hibiscus moschatus Moench.
Angelica root	Angelica archangelica L.
Angelica seed	Do.
Angelica stem	Do.
Angostura (cusparia bark)	Galipea officinalis Hancock.
Anise	Pimpinella anisum L.
Asafetida	Ferula assa-foetida L. and related spp. of Ferula.
Balm (lemon balm)	Melissa officinalis L.
Balsam of Peru	Myroxylon pereirae Klotzsch.
Basil	Ocimum basilicum L.
Bay leaves	Laurus nobilis L.
Bay (myrcia oil)	Pimenta racemosa (Mill.) J. W. Moore.
Bergamot (bergamot orange)	Citrus aurantium L. subsp. bergamia Wright et Arn.
Bitter almond (free from prussic acid)	Prunus amygdalus Batsch, Prunus armeniaca L., or Prunus persica (L.) Batsch.
Bois de rose	Aniba rosaeodora Ducke.
Cacao	Theobroma cacao L.
Camomile (chamomile) flowers, Hungarian.	Matricaria chamomilla L.
Camomile (chamomile) flowers, Roman or English.	Anthemis nobilis L.
Cananga	Cananga odorata Hook. f. and Thoms.
Capsicum	Capsicum frutescens L. and Capsicum annuum L.
Caraway	Carum carvi L.
Cardamom seed (cardamon)	Elettaria cardamomum Maton.
Carob bean	Ceratonia siliqua L.
Carrot	Daucus carota L.
Cascarilla bark	Croton eluteria Benn.
Cassia bark, Chinese	Cinnamomum cassia Blume.

(2) ESSENTIAL OILS, OLEORESINS (SOLVENT-FREE), AND NATURAL EXTRACTIVES (INCLUDING DISTILLATES)—Continued

Common name	*Botanical name of plant source*
Cassia bark, Padang or Batavia	Cinnamomum burmanni Blume.
Cassia bark, Saigon	Cinnamomum loureirii Nees.
Celery seed	Apium graveolens L.
Cherry, wild, bark	Prunus serotina Ehrh.
Chervil	Anthriscus cerefolium (L.) Hoffm.
Chicory	Cichorium intybus L.
Cinnamon bark, Ceylon	Cinnamomum zeylanicum Nees.
Cinnamon bark, Chinese	Cinnamomum cassia Blume.
Cinnamon bark, Saigon	Cinnamomum loureirii Nees.
Cinnamon leaf, Ceylon	Cinnamomum zeylanicum Nees.
Cinnamon leaf, Chinese	Cinnamomum cassia Blume.
Cinnamon leaf, Saigon	Cinnamomum loureirii Nees.
Citronella	Cymbopogon nardus Rendle.
Citrus peels	Citrus spp.
Clary (clary sage)	Salvia sclarea L.
Clove bud	Eugenia caryophyllata Thunb.
Clove leaf	Do.
Clove stem	Do.
Clover	Trifolium spp.
Coca (decocainized)	Erythroxylum coca Lam. and other spp. of Erythroxylum.
Coffee	Coffea spp.
Cola nut	Cola acuminata Schott and Endl., and other spp. of Cola.
Coriander	Coriandrum sativum L.
Corn silk	Zea mays L.
Cumin (cummin)	Cuminum cyminum L.
Curacao orange peel (orange, bitter peel).	Citrus aurantium L.
Cusparia bark	Galipea officinalis Hancock.
Dandelion	Taraxacum officinale Weber and T. laevigatum DC.
Dandelion root	Do.
Dill	Anethum graveolens L.
Dog grass (quackgrass, triticum)	Agropyron repens (L.) Beauv.
Elder flowers	Sambucus canadensis L. and S. nigra L.
Estragole (esdragol, esdragon, tarragon).	Artemisia dracunculus L.
Estragon (tarragon)	Do.
Fennel, sweet	Foeniculum vulgare Mill.
Fenugreek	Trigonella foenum-graecum L.
Galanga (galangal)	Alpinia officinarum Hance.
Garlic	Allium sativum L.
Geranium	Pelargonium spp.
Geranium, East Indian	Cymbopogon martini Stapf.
Geranium, rose	Pelargonium graveolens L'Her.
Ginger	Zingiber officinale Rosc.
Glycyrrhiza	Glycyrrhiza glabra L. and other spp. of Glycyrrhiza.
Glycyrrhizin, ammoniated	Do.
Grapefruit	Citrus paradisi Macf.
Guava	Psidium spp.
Hickory bark	Carya spp.
Horehound (hoarhound)	Marrubium vulgare L.
Hops	Humulus lupulus L.
Horsemint	Monarda punctata L.
Hyssop	Hyssopus officinalis L.
Immortelle	Helichrysum augustifolium DC.
Jasmine	Jasminum officinale L. and other spp. of Jasminum.
Juniper (berries)	Juniperus communis L.

(2) ESSENTIAL OILS, OLEORESINS (SOLVENT-FREE), AND NATURAL EXTRACTIVES (INCLUDING DISTILLATES)—Continued

Common name	*Botanical name of plant source*
Kola nut	Cola acuminata Schott and Endl., and other spp. of Cola.
Laurel berries	Laurus nobilis L.
Laurel leaves	Do.
Lavender	Lavandula officinalis Chaix.
Lavender, spike	Lavandula latifolia Vill.
Lavandin	Hybrids between Lavandula officinalis Chaix and Lavandula latifolin Vill.
Lemon	Citrus limon (L.) Burm. f.
Lemon balm (see balm).	
Lemon grass	Cymbopogon citratus DC. and Cymbopogon flexuosus Stapf.
Lemon peel	Citrus limon (L.) Burm. f.
Licorice	Glycyrrhiza glabra L. and other spp. of Glycyrrhiza.
Lime	Citrus aurantifolia Swingle.
Linden flowers	Tilia spp.
Locust bean	Ceratonia siliqua L.
Lupulin	Humulus lupulus L.
Mace	Myristica fragrans Houtt.
Malt (extract)	Hordeum vulgare L., or other grains.
Mandarin	Citrus reticulata Blanco.
Marjoram, sweet	Majorana hortensis Moench.
Maté	Ilex paraguariensis St. Hil.
Melissa (see balm).	
Menthol	Mentha spp.
Menthyl acetate	Do.
Molasses (extract)	Saccharum officinarum L.
Mustard	Brassica spp.
Naringin	Citrus paradisi Macf.
Neroli, bigarade	Citrus aurantium L.
Nutmeg	Myristica fragrans Houtt.
Onion	Allium cepa L.
Orange, bitter, flowers	Citrus aurantium L.
Orange, bitter, peel	Do.
Orange leaf	Citrus sinensis (L.) Osbeck.
Orange, sweet	Do.
Orange, sweet, flowers	Do.
Orange, sweet, peel	Do.
Origanum	Origanum spp.
Palmarosa	Cymbopogon martini Stapf.
Paprika	Capsicum annuum L.
Parsley	Petroselinum crispum (Mill.) Mansf.
Pepper, black	Piper nigrum L.
Pepper, white	Do.
Peppermint	Mentha piperita L.
Peruvian balsam	Myroxylon pereirae Klotzsch.
Petitgrain	Citrus aurantium L.
Petitgrain lemon	Citrus limon (L.) Burm. f.
Petitgrain mandarin or tangerine	Citrus reticulata Blanco.
Pimenta	Pimenta officinalis Lindl.
Pimenta leaf	Primenta officinalis Lindl.
Pipsissewa leaves	Chimaphila umbellata Nutt.
Pomegranate	Punica granatum L.
Prickly ash bark	Xanthoxylum (or Zanthoxylum) Americanum Mill. or Xanthoxylum clava-herculis L.
Rose absolute	Rosa alba L., Rosa centifolia L., Rosa damascena Mill., Rosa gallica L., and vars. of these spp.
Rose (otto of roses, attar of roses)	Do.
Rose buds	Rosa spp.
Rose flowers	Do.
Rose fruit (hips)	Do.
Rose geranium	Pelargonium graveolens L'Her.
Rose leaves	Rosa spp.
Rosemary	Rosmarinus officinalis L.
Rue	Ruta graveolens L.
Saffron	Crocus sativus L.
Sage	Salvia officinalis L.
Sage, Greek	Salvia triloba L.
Sage, Spanish	Salvia lavandulaefolia Vahl.
St. John's bread	Ceratonia siliqua L.
Savory, summer	Satureia hortensis L.
Savory, winter	Satureia montana L.
Schinus molle	Schinus molle L.
Sloe berries (blackthorn berries)	Prunus spinosa L.
Spearmint	Mentha spicata L.
Spike lavender	Lavandula latifolia Vill.
Tamarind	Tamarindus indica L.
Tangerine	Citrus reticulata Blanco.
Tannic acid	Nutgalls of Quercus infectoria Oliver and related spp. of Quercus. Also in many other plants.
Tarragon	Artemisia dracunculus L.
Tea	Thea sinensis L.
Thyme	Thymus vulgaris L. and Thymus zygis var. gracilis Boiss.
Thyme, white	Do.
Thyme, wild or creeping	Thymus serpyllum L.
Triticum (see dog grass).	
Tuberose	Polianthes tuberosa L.
Turmeric	Curcuma longa L.
Vanilla	Vanilla planifolia Andr. or Vanilla tahitensis J. W. Moore.
Violet flowers	Viola odorata L.
Violet leaves	Do.
Violet leaves absolute	Do.
Wild cherry bark	Prunus serotina Ehrh.
Ylang-ylang	Cananga odorata Hook. f. and Thoms.
Zedoary bark	Curcuma zedoaria Rosc.

(3) NATURAL SUBSTANCES USED IN CONJUNCTION WITH SPICES AND OTHER NATURAL SEASONINGS AND FLAVORINGS

Common name	*Botanical name of plant source*
Algae, brown (kelp)	Laminaria spp. and Nereocystis spp.
Algae, red	Porphyra spp. and Rhodymenia palmata (L.) Grev.
Dulse	Rhodymenia palmata (L.)

(4) NATURAL EXTRACTIVES (SOLVENT-FREE) USED IN CONJUNCTION WITH SPICES, SEASONINGS, AND FLAVORINGS

Common name	*Botanical name of plant source*
Algae, brown	Laminaria spp. and Nereocystis spp.
Algae, red	Porphyra spp. and Rhodymenia palmata (L.) Grev.
Apricot kernel (persic oil)	Prunus armeniaca L.
Dulse	Rhodymenia palmata (L.) Grev.
Kelp (see algae, brown).	
Peach kernel (persic oil)	Prunus persica Sieb. et Zucc.
Peanut stearine	Arachis hypogaea L.
Persic oil (see apricot kernel and peach kernel).	
Quince seed	Cydonia oblonga Miller.

(5) MISCELLANEOUS

Common name	*Derivation*
Ambergris	Physeter macrocephalus L.
Castoreum	Castor fiber L. and C. canadensis Kuhl.
Civet (zibeth, zibet, zibetum)	Civet cats, Viverra civetta Schreber and Viverra zibetha Schreber.
Cognac oil, white and green	Ethyl oenanthate, so-called.
Musk (Tonquin musk)	Musk deer, Moschus moschiferus L.

(f) *Trace minerals added to animal feeds.*[1] These substances added to animal feeds as nutritional dietary supplements are generally recognized as safe when added at levels consistent with good feeding practice.

Element	*Source compounds*
Cobalt	Cobalt acetate.
	Cobalt carbonate.
	Cobalt chloride.
	Cobalt oxide.
	Cobalt sulfate.
Copper	Copper carbonate.
	Copper chloride.
	Copper gluconate.
	Copper hydroxide.
	Copper orthophosphate.
	Copper oxide.
	Copper pyrophosphate.
	Copper sulfate.
Iodine	Calcium iodate.
	Calcium iodobehenate.
	Cuprous iodide.
	3,5-Diiodosalicylic acid.
	Ethylenediamine dihydroiodide.
	Potassium iodate.
	Potassium iodide.
	Sodium iodate.
	Sodium iodide.
	Thymol iodide.
Iron	Iron ammonium citrate.
	Iron carbonate.
	Iron chloride.
	Iron gluconate.
	Iron oxide.
	Iron phosphate.
	Iron pyrophosphate.
	Iron sulfate.
	Reduced iron.
Manganese	Manganese acetate.
	Manganese carbonate.
	Manganese citrate (soluble).
	Manganese chloride.
	Manganese gluconate.
	Manganese orthophosphate.
	Manganese phosphate (dibasic).
	Manganese sulfate.
	Manganous oxide.
Zinc	Zinc acetate.
	Zinc carbonate.
	Zinc chloride.
	Zinc oxide.
	Zinc sulfate.

(g) Synthetic flavoring substances and adjuvants that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

Acetaldehyde (ethanal).
Acetoin (acetyl methylcarbinol).
Aconitic acid (equisetic acid, citridic acid, achilleic acid).
Anethole (parapropenyl anisole).
Benzaldehyde (benzoic aldehyde).
Brominated vegetable oils.
N-Butyric acid (butanoic acid).
d- or *l*-Carvone (carvol).
Cinnamaldehyde (cinnamic aldehyde).
Citral (2,6-dimethyloctadien-2,6-*al*-8, geranial, neral).
Decanal (*N*-decylaldehyde, capraldehyde, capric aldehyde, caprinaldehyde, aldehyde C-10).
Diacetyl (2,3-butandeione).
Ethyl acetate.
Ethyl butyrate.
3-Methyl-3-phenyl glycidic acid ethyl ester (ethyl-methyl-phenyl-glycidate, so-called strawberry aldehyde, C-16 aldehyde).
Ethyl vanillin.
Eugenol.
Geraniol (3,7-dimethyl-2,6 and 3,6-octadien-1-*ol*).
Geranyl acetate (geraniol acetate).
Glycerol (glyceryl) tributyrate (tributyrin, butyrin).
Limonene (*d-, l-, and dl-*).
Linalool (linalol, 3,7-dimethyl-1,6-octadien-3-*ol*).
Linalyl acetate (bergamol).
1-Malic acid.
Methyl anthranilate (methyl-2-aminobenzoate).
Piperonal (3,4-methylenedioxy-benzaldehyde, heliotropin).
Vanillin.

(h) Substances migrating to food from paper and paperboard products used in food packaging that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

Acetic acid.
Alum (double sulfate of aluminum and ammonium potassium, or sodium).
Aluminum hydroxide.
Aluminum oleate.
Aluminum palmitate.
Ammonium chloride.
Ammonium hydroxide.
Calcium chloride.
Calcium hydroxide (lime).
Calcium sulfate.
Casein.
Cellulose acetate.
Clay (kaolin).
Copper sulfate.
Cornstarch.
Corn sugar (sirup).
Dextrin.
Diatomaceous earth filler.
Ethyl cellulose.
Ethyl vanillin.
Ferric sulfate.
Ferrous sulfate.
Formic acid or sodium salt.
Glycerin.
Guar gum.
Invert sugar.
Iron, reduced.
Locust bean gum (carob bean gum).
Magnesium carbonate.
Magnesium chloride.
Magnesium hydroxide.
Magnesium sulfate.
Methyl and ethyl acrylate.
Mono- and diglycerides from glycerolysis of edible fats and oils.
Oleic acid.
Oxides of iron.
Potassium sorbate.
Propionic acid.
Propylene glycol.
Silicon dioxides.
Pulps from wood, straw, bagasse, or other natural sources.
Soap (sodium oleate, sodium palmitate).
Sodium aluminate.
Sodium carbonate.
Sodium chloride.
Sodium hexametaphosphate.
Sodium hydrosulfite.
Sodium hydroxide.
Sodium phosphoaluminate.
Sodium silicate.
Sodium sorbate.
Sodium sulfate.
Sodium thiosulfate (additive in salt).
Sodium tripolyphosphate.
Sorbitol.
Soy protein, isolated.
Sulfamic acid.
Sulfuric acid.
Starch, acid modified.
Starch, pregelatinized.
Starch, unmodified.
Sucrose.
Talc.
Urea.
Vanillin.
Zinc hydrosulfite.
Zinc sulfate.

(i) Substances migrating to food from cotton and cotton fabrics used in dry food packaging that are generally recognized as safe for their intended use, within the meaning of section 409 of the act, are as follows:

Acacia (gum arabic).
Acetic acid.
Beef tallow.
Calcium chloride.
Carboxymethylcellulose.
Coconut oil, refined.
Corn dextrin.
Cornstarch.
Fish oil (hydrogenated).
Gelatin.
Guar gum.
Hydrogen peroxide.
Japan wax.
Lard.
Lard oil.
Lecithin (vegetable).
Locust bean gum (carob bean gum).
Oleic acid.
Peanut oil.
Potato starch.
Sodium acetate.
Sodium bicarbonate.
Sodium carbonate.
Sodium chloride.
Sodium hydroxide.
Sodium sulfate.
Sodium silicate.
Sodium tripolyphosphate.
Sorbose.
Soybean oil (hydrogenated).
Stearic acid.
Talc.
Tall oil.
Tallow (hydrogenated).
Tallow flakes.
Tapioca starch.
Tartaric acid.
Tetrasodium pyrophosphate.
Urea.
Wheat starch.
Zinc chloride.

(Sec. 701, 52 Stat. 1055, as amended, sec. 409, 72 Stat. 1785; 21 U.S.C. 371, 348)

§ 121.102 Adjuvants for pesticide chemicals.

Adjuvants, identified and used in accordance with § 120.1001 (c) and (d) of this chapter, which are added to pesticide use dilutions by a grower or applicator prior to application to the raw agricultural commodity, are exempt from the requirement of tolerances under section 409 of the act.

(Sec. 409, 72 Stat. 1785; 21 U.S.C. 348)

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[1] All substances listed may be in anhydrous or hydrated form.

Subpart C—Food Additives Permitted in Feed and Drinking Water of Animals or for the Treatment of Food-Producing Animals

AUTHORITY: The provisions of this Subpart C issued under sec. 409, 72 Stat. 1785; 21 U.S.C. 348.

§ 121.200 Definitions and interpretations applicable to Subpart C.

(a) Regulations prescribing conditions under which additives may be safely used in animal feed, animal feed supplements, concentrates, or premixes or in animals intended for food use shall not be construed to relieve such additives from the provisions of sections 505 and 507 of the act, where applicable, and § 121.7 and § 121.9 of the food additive regulations.

(b) For the purposes of this Subpart C:

(1) A "complete feed" is an article intended to be administered as the sole ration to an animal.

(2) A "feed additive supplement" is an article for the diet of an animal which contains one or more food additives, and is intended to be:

(i) Further diluted and mixed to produce a complete feed; or

(ii) Fed undiluted as a supplement to other rations; or

(iii) Offered free choice with other parts of the ration separately available.

A "feed additive supplement" is safe for the animal and will not produce unsafe residues in the edible products from food-producing animals if fed according to directions.

(3) A "feed additive concentrate" is an article intended to be further diluted to produce a complete feed or a feed additive supplement and is not suitable for offering as a supplement or for offering free choice without dilution. It contains, among other things, one or more additives in amounts, in a suitable feed base, such that from 100 to 1,000 pounds of concentrate must be diluted to produce 1 ton of a complete feed. A "feed additive concentrate" is unsafe if fed free choice or as a supplement, because of danger to the health of the animal or because of the production of residues in the edible products from food-producing animals in excess of the safe levels established in this Part 121.

(4) A "feed additive premix" is an article that must be diluted for safe use in a feed additive concentrate, a feed additive supplement, or a complete feed. It contains, among other things, one or more additives in high concentration in a suitable feed base such that up to 100 pounds must be diluted to produce 1 ton of a complete feed. A "feed additive premix" contains additives at levels for which safety to the animal has not been demonstrated and/or which may result, when fed undiluted, in residues in the edible products from food-producing animals in excess of the safe levels established in this Part 121.

(5) In feeding chickens:

(i) "Broiler chickens" are chickens raised for meat purposes only.

(ii) "Replacement chickens" are chickens being raised for the purpose of egg production.

(iii) "Laying chickens" are chickens producing eggs for food.

(iv) "Breeding chickens" are chickens producing eggs used for hatching.

(6) In feeding swine:

(i) "Prestarter ration" is a feed administered from the time the baby pigs begin to eat until they weigh approximately 12 pounds.

(ii) "Starter ration" is a complete feed administered to the animals as they grow in weight from approximately 10 pounds to 50 pounds.

(iii) "Grower ration" is a complete feed administered to the animals as they grow in weight from approximately 30 pounds to 125 pounds.

(iv) "Finisher ration" is a complete feed administered to the animals as they grow in weight from approximately 100 pounds to market weight.

(c) The statements listed in this paragraph may be used on labels, if desired, in addition to the "indications for use" required by the applicable section entries:

(1) Prevention and treatment of bacterial swine enteritis by use of chlortetracycline may bear one or more of the additional parenthetical disease entities such as: "(Salmonellosis or necrotic enteritis caused by *Salmonella cholerasuis* and vibrionic dysentery)" immediately after the required words "bacterial swine enteritis".

(2) [Reserved]

§ 121.201 Ethoxyquin in certain dehydrated forage crops.

Ethoxyquin (1,2-dihydro-6-ethoxy-2,2,4-trimethylquinoline) may be safely used in the dehydrated forage crops listed in paragraph (a) of this section, when incorporated therein in accordance with the conditions prescribed in this section:

(a) It may be added to dehydrated forage prepared from:

Alfalfa	Medicago sativa.
Barley	Hordeum vulgare.
Clovers:	
Alsike clover	Trifolium hybridum.
Crimson clover	Trifolium incarnatum.
Red clover	Trifolium pratense.
White clover (including Ladino).	Trifolium repens.
White sweetclover	Melilotus alba.
Yellow sweetclover	Melilotus officinalis.
Coastal Bermudagrass.	Cynodon dactylon.
Corn	Zea mays.
Fescue	Festuca sp.
Oats	Avena sativa.
Orchardgrass	Dactylis glomerata.
Reed canarygrass	Phalaris arundinacea.
Ryegrass (annual and perennial).	Elymus sp. and Lolium perenne.
Sorghums	Sorghum vulgare, vars, feterita, shallu, kaoliang, broomcorn.
Sudan grass	Sorghum vulgare sudanense.
Wheat	Triticum aestivum.

or any mixture of such forage crops, for use only as an animal feed.

(b) Such additive is used only as a chemical preservative for the purpose of retarding oxidative destruction of naturally occurring carotenes and vitamin E in the forage crops.

(c) It is added to the dehydrated forage crops in an oil mixture containing only suitable animal or suitable vegetable oil, prior to grinding and mixing.

(d) The maximum quantity of the additive permitted to be used and to remain in or on the dehydrated forage crop shall not exceed 150 parts per million.

(e) To assure the safe use of the additive, the label of the market package shall contain, in addition to other information required by the act:

(1) The name of the additive as specified in this section.

(2) Directions for the incorporation of the additive in the forage crops, as specified in paragraph (c) of this section, with the directive that only suitable animal or suitable vegetable oils are to be used in the oil mix.

(f) The label of any dehydrated forage crops treated with the additive or the label of an animal-feed supplement containing such treated forage crops, shall, in addition to other information required by the act, bear the following statements:

(1) "Ethoxyquin, a preservative," or "Ethoxyquin added to retard the oxidative destruction of carotene and vitamin E."

(2) The statement "For use in animal feed only."

§ 121.202 Ethoxyquin in animal feeds.

Ethoxyquin (1,2-dihydro-6-ethoxy-2,2,4-trimethylquinoline) may be safely used in animal feeds, when incorporated therein in accordance with the following prescribed conditions:

(a) It is intended for use only: (1) As a chemical preservative for retarding oxidation of carotene, xanthophylls, and vitamins A and E in animal feed and fish food and, (2) as an aid in preventing the development of organic peroxides in canned pet food.

(b) The maximum quantity of the additive permitted to be used and to remain in or on the treated article shall not exceed 150 parts per million.

(c) To assure safe use of the additive, the label and labeling of the food additive container and that of any intermediate premixes prepared therefrom shall contain, in addition to other information required by the act:

(1) The name of the additive, ethoxyquin.

(2) A statement of the concentration or strength contained therein.

(3) Adequate use directions to provide for a finished article with the proper concentration of the additive as provided in paragraph (b) of this section, whether or not intermediate premixes are to be used.

(d) The label of any animal feed containing the additive shall, in addition to the other information required by the act, bear the statement "Ethoxyquin, a preservative" or "Ethoxyquin added to retard the oxidative destruction of carotene, xanthophylls, and vitamins A and E."

§ 121.203 Polyoxyethylene glycol (400) mono- and dioleates.

The food additive polyoxyethylene glycol (400) mono- and dioleates may be safely used as an emulsifier in calf-milk replacer formulations.

§ 121.204 Dioxathion.

A tolerance of 18 parts per million is established for residues of dioxathion (2,3-*p*-dioxanedithiol-*S,S*-bis (*O,O*-diethylphosphorodithioate)) in dehydrated citrus pulp for cattle feed when present therein as a result of the application of the pesticide to the growing agricultural crop.

§ 121.205 Reserpine.

The food additive reserpine (3,4,5-trimethoxybenzoyl methyl reserpate) may be safely used in animal feed in accordance with the following prescribed conditions:

(a) When used in this section:

(1) The term "reserpine" refers to reserpine or feed grade reserpine.

(2) The quantities of the additive prescribed refer to the weight of reserpine as the base, assaying not less than 94 percent $C_{33}H_{40}N_2O_9$.

(3) The antibiotic activities authorized are expressed in terms of the weight of the appropriate antibiotic standard.

(b) Permitted uses of reserpine alone and with certain other additives in medicated feeds are described in tabular form in this section, and the tables are to be read as follows:

(1) Where the principal ingredient is the sole medicament, the required limitations and indications for use are found on the same line entry.

(2) Where the principal ingredient is combined with a secondary ingredient, the required limitations and indications for use for the secondary ingredient are found on the same line entry. The required limitations and indications for use of the principal ingredient at the designated concentration are found on the line entry for the principal ingredient alone, and both sets of applicable limitations and indications for use shall apply. If duplicate limitations occur, they may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredient are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of greater value than the other additives named in this section.

(c) It is used or intended for use as follows:

TABLE 1—RESERPINE WITH OR WITHOUT ANTIBIOTICS IN COMPLETE CHICKEN FEED

Principal ingredient	Gm. per ton	Combined with—	Gm. per ton	Limitations	Indications for use
1. Reserpine	0.908 (0.0001%)			For broilers	Improve performance under stressful environmental conditions.
(a) Reserpine	.908	Bacitracin	4-50	For broilers; as bacitracin or zinc bacitracin.	Growth promotion and feed efficiency.
(b) Reserpine	.908	Chlortetracycline	10-50	For broilers; as chlortetracycline hydrochloride.	Do.
(c) Reserpine	.908	do	50-200	For broilers; §121.208(d), table 1, items 1, 2, 6, 11; as chlortetracycline hydrochloride.	§ 121.208(d); table 1, items 1, 2, 6, 11.
(d) Reserpine	.908	Bacitracin	50-200	As prescribed in §121.232 (d), items 2.1, 5.1, and 6.1; or in § 121.233(d), items 2.1, 5.1, and 6.1; as bacitracin or zinc bacitracin.	§ 121.232(d), items 2.1, 5.1, and 6.1; § 121.233(d), items 2.1, 5.1, and 6.1.
2. Reserpine	1.82 (0.0002%)			Laying hens	Improve productive performance under stressful environmental conditions.
(a) Reserpine	1.82	Bacitracin	10-200	As prescribed in § 121.232 (d), items 1.1, 2.1, 4.1, 5.1, and 6.1; or in § 121.233(d), items 1.1, 2.1, 4.1, 5.1, and 6.1; as bacitracin or zinc bacitracin.	§ 121.232(d), items 1.1, 2.1, 4.1, 5.1, and 6.1. § 121.233(d), items 1.1; 2.1, 4.1, 5.1, and 6.1.

TABLE 2—RESERPINE WITH OR WITHOUT ANTIBIOTICS IN COMPLETE TURKEY FEED

Principal ingredient	Gm. per ton	Combined with—	Gm. per ton	Limitations	Indications for use
1. Reserpine	0.182 0.00002%)			For turkeys over 4 weeks of age.	Prevention of aortic rupture.
(a) Reserpine	.182	Penicillin	2.4-50	For turkeys over 4 weeks of age; as procaine penicillin.	Growth promotion and feed efficiency.
(b) Reserpine	.182	Bacitracin	4-50	For turkeys over 4 weeks of age; as bacitracin or zinc bacitracin.	Do.
(c) Reserpine	.182	Chlortetracycline	10-50	For turkeys over 4 weeks of age; as chlortetracycline hydrochloride.	Do.
(d) Reserpine	.182	do	50-200	For turkeys; over 4 weeks of age; § 121.208 (d), table 1, items 1, 3, 7, 12; as chlortetracycline hydrochloride.	§121.208(d), table 1, items 1, 3, 7, 12.
2. Reserpine	.908 (0.0001%)			For turkeys over 4 weeks of age; feed not to exceed 5 days.	Treatment of aortic rupture.
(a) Reserpine	.908	Penicillin	2.4-50	For turkeys over 4 weeks of age; feed not to exceed 5 days; as procaine penicillin.	Growth promotion and feed efficiency.
(b) Reserpine	.908	Bacitracin	4-50	For turkeys over 4 weeks of age; feed not to exceed 5 days; as bacitracin or zinc bacitracin.	Do.
(c) Reserpine	.908	Chlortetracycline	10-50	For turkeys over 4 weeks of age; feed not to exceed 5 days; as chlortetracycline hydrochloride.	Do.
(d) Reserpine	.908	do	50-200	For turkeys; over 4 weeks of age; feed not to exceed 5 days; as prescribed in § 121.208 (d), table 1, items 1, 3, 7, 12; as chlortetracycline hydrochloride.	§121.208(d), table 1, items 1, 3, 7, 12.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein, except that the label of the complete feed need not bear the quantities of the antibiotic drugs added solely for growth promotion.

NOTE: § 121.205(d)(2) was amended to read "A statement of the quantity or quantities contained therein" by an order published in the FEDERAL REGISTER on March 20, 1965, 30 F.R. 3707, effective January 1, 1966. The effective date of this amendment was stayed by an order published in the FEDERAL REGISTER on September 28, 1965, 30 F.R. 12353, pending resolution of issues at a public hearing.

(3) Adequate directions and warnings for use.

§ 121.206 Condensed, extracted glutamic acid fermentation product.

The additive condensed, extracted glutamic acid fermentation product may be safely used in poultry feed under the following conditions:

(a) The additive is a concentrated mixture of the liquor remaining from the extraction of glutamic acid, combined with the cells of *Corynebacterium lilium* used to produce the glutamic acid.

(b) It is used or intended for use as a protein supplement for poultry at not more than 5 percent of the total ration.

(c) In order to assure safe use, the label and labeling of the additive shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive.

(2) A statement of the concentration or strength of the additive contained in any mixture.

(3) Adequate directions for use.

§ 121.207 Zoalene.

The food additive zoalene (3,5-dinitro-o-toluamide) may be safely used in accordance with the following prescribed conditions:

(a) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(b) Permitted uses of zoalene alone and with certain other additives in medicated feeds are described in tabular form in this section. These tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use for the principal ingredients as the medicament alone or with additional ingredients added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredient are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and numbered line item of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(c) The additive is used or intended for use as follows:

ZOALENE IN COMPLETE FEEDS FOR CHICKENS AND TURKEYS

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Zoalene	113.5–170.3 (0.0125%–0.01875%)			For turkeys grown for meat purposes only.	Prevention and control of coccidiosis.
a. Zoalene	113.5–170.3	Penicillin	2.4–50	For turkeys grown for meat purposes only; as procaine penicillin.	Growth promotion and feed efficiency.
b. Zoalene	113.5–170.3	Bacitracin	4–50	For turkeys grown for meat purposes only; as bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. Zoalene	113.5–170.3	Oxytetracycline	50–200	§ 121.251(d), table 1, items 1, 3, 4, 5, 7, 11.	§ 121.251(d), table 1, items 1, 3, 4, 5, 7, 11.
d. Zoalene	113.5–170.3	Arsanilic acid	90 (0.01%)	For turkeys grown for meat purposes only; withdraw 5 days before slaughter.	Growth promotion and feed efficiency; improving pigmentation.
e. Zoalene	113.5–170.3	Sodium arsanilate	90 (0.01%)	do	Do.
f. Zoalene	113.5–170.3	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	§ 121.262, table 1, item 2.1.	§ 121.262, table 1, item 2.1.

ZOALENE IN COMPLETE FEEDS FOR CHICKENS AND TURKEYS—Continued

Principal Ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
2.1 Zoalene	113.5 (0.0125%)			For broiler chickens	Prevention and control of coccidiosis.
2.2 Zoalene	113.5 (0.0125%)	Arsanilic acid	90 (0.01%)	For broiler chickens; withdraw 5 days before slaughter.	Prevention and control of coccidiosis; growth promotion and feed efficiency; improving pigmentation.
2.3 Zoalene	113.5 (0.0125%)	Sodium arsanilate	90 (0.01%)	do	Do.
2.4 Zoalene	113.5 (0.0125%)	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)	For broiler chickens; withdraw 5 days before slaughter.	Prevention and control of coccidiosis; growth promotion and feed efficiency; improving pigmentation.
a. 2.1, 2.2, or 2.4.	113.5	Penicillin	2.4–50	For broiler chickens; as procaine penicillin.	Growth promotion and feed efficiency.
b. 2.1, 2.2, or 2.4.	113.5	Penicillin plus bacitracin.	3.6–50	For broiler chickens; not less than 0.6 gm. of penicillin, nor less than 3 gm. of bacitracin, nor more than 50 gm. in combination; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. 2.1, 2.2, or 2.4.	113.5	Bacitracin	4–50	For broiler chickens; as bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Growth promotion and feed efficiency.
d. 2.1	113.5	Oleandomycin	1–2	For broiler chickens	Do.
e. 2.1	113.5	Chlortetracycline	50–200	For broiler chickens; as prescribed in § 121.208(d), table 1, items 1, 2, 5, 6, 11; as chlortetracycline hydrochloride.	As prescribed in § 121.208(d), table 1, items 1, 2, 5, 6, 11.
f. 2.1	113.5	Bacitracin	50–200	For broiler chickens; as prescribed in § 121.222(d), table 1, item 2.1 or 6.1; § 121.223(d), table 1, item 2.1 or 6.1; as bacitracin or zinc bacitracin.	As prescribed in § 121.222(d), table 1, item 2.1 or 6.1; § 121.223(d), table 1, item 2.1 or 6.1.
g. 2.1	113.5	Oxytetracycline	50–200	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.
h. 2.1	113.5	Tylosin	4–50	For broiler chickens; as tylosin phosphate.	Growth promotion and feed efficiency.
i. 2.1	113.5	Hygromycin B	8–12	For broiler chickens	§ 121.212(d), table 1, item 1.
j. 2.1	113.5	Erythromycin	4.6–18.5	For broiler chickens; as erythromycin thiocyanate.	Growth promotion and feed efficiency.
k. 2.1	113.5	Hygromycin B plus Tylosin plus penicillin.	8–12 3.2–50	For broiler chickens; 3.2–50 gm. of combination containing a ratio of 1.2 parts of penicillin to 2 parts of tylosin; as procaine penicillin plus tylosin phosphate.	§ 121.212(d), table 1, item 1 and growth promotion and feed efficiency.
l. [Reserved]					
m. 2.1	113.5	Tylosin + Hygromycin B	4–50 8–12	For broiler chickens; as tylosin phosphate.	§ 121.212(d), table 1, item 1, and growth promotion and feed efficiency.
n. 2.1	113.5	Tylosin+penicillin.	3.2–50	For broiler chickens; in combination ratio of 1.2 parts of penicillin to 2 parts of tylosin; as tylosin phosphate plus procaine penicillin.	Growth promotion and feed efficiency.

ZOALENE IN COMPLETE FEEDS FOR CHICKENS AND TURKEYS—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3.1 Zoalene	36.3–113.5 (0.004%–0.0125%)			For replacement chickens; in complete feed only; (grower ration not to be fed to birds under 5½ weeks of age nor over 14 weeks of age), as follows:	Development of active immunity to coccidiosis.

Growing conditions	Amount of zoalene in feed for birds by age group	
	Starter ration	Grower ration
	Grams per ton	*Grams per ton*
Severe exposure	113.5 (0.0125%)	75.4–113.5 (0.0083%–0.0125%)
Light to moderate exposure.	75.4–113.5 (0.0083%–0.0125%)	36.3–75.4 (0.004%–0.0083%)

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3.2 Zoalene	36.3–113.5 (0.004%–0.0125%)	Arsanilic acid	90(0.01%)	For replacement chickens; in complete feed only; grower ration not to be fed to birds under 5½ weeks of age nor over 14 weeks of age; withdraw 5 days before slaughter; as follows:	Development of active immunity to coccidiosis; growth promotion and feed efficiency; improving pigmentation.

Growing conditions	Starter ration	Grower ration
	Grams per ton	*Grams per ton*
Severe exposure	113.5 (0.0125%)	75.4–113.5 (0.0083%–0.0125%)
Light to moderate exposure	75.4–113.5 (0.0083%–0.0125%)	36.3–75.4 (0.004%–0.0083%)

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3.3 Zoalene	36.3–113.5 (0.004%–0.0125%)	Sodium arsanilate	90 (0.01%)	do	Do.
3.4 Zoalene	36.3–113.5 (0.004%–0.0125%)	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)	do	Do.
a. 3.1, 3.2 or 3.4.	do	Penicillin	2.4–50	Replacement chickens; as procaine penicillin.	Growth promotion and feed efficiency.
b. 3.1, 3.2 or 3.4.	36.3–113.5 (0.004%–0.0125%)	Penicillin plus bacitracin.	3.6–50	Replacement chickens; not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin, nor more than 50 gm. of combination; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.

ZOALENE IN COMPLETE FEEDS FOR CHICKENS AND TURKEYS—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3.4 Zoalene—Con. c. 3.1, 3.2 or 3.4.	36.3–113.5 (0.004%–0.0125%)	Bacitracin	4–50	Replacement chickens; as bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Growth promotion and feed efficiency.
d. 3.1	do	Oleandomycin	1–2	Replacement chickens	Do.
e. 3.1	do	Chlortetracycline	50–200	Replacement chickens; as prescribed in § 121.208(d), table 1, items 1, 2, 5, 6, 11; as chlortetracycline hydrochloride.	As prescribed in § 121.208(d), table 1, items 1, 2, 5, 6, 11.
f. 3.1	36.3–113.5	Bacitracin	50–200	For replacement chickens; as prescribed in § 121.222(d), table 1, item 2.1 or 6.1; § 121.233(d), table 1, item 2.1 or 6.1; as bacitracin or zinc bacitracin.	As prescribed in § 121.222(d), table 1, item 2.1 or 6.1; § 121.233(d), table 1, item 2.1 or 6.1.
g. 3.1	36.3–113.5	Oxytetracycline	50–200	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.
h. 3.1	36.3–113.5	Tylosin	4–50	For replacement chickens; as tylosin phosphate.	Growth promotion and feed efficiency.
i. 3.1	36.3–113.5	Hygromycin B	8–12	For replacement chickens.	§ 121.213(d), table 1, item 1.
j. 3.1	36.3–113.5	Erythromycin	4.6–18.5	For replacement chickens; as erythromycin thiocyanate.	Growth promotion and feed efficiency.
k. 3.1	36.3–113.5	Hygromycin B plus Tylosin plus penicillin.	8–12 3.2–50	For replacement chickens; 3.2–50 gm. of combination containing a ratio of 1.2 parts of penicillin to 2 parts of tylosin; as procaine penicillin plus tylosin phosphate.	§ 121.213(d), table 1, item 1 and growth promotion and feed efficiency.
l. [Reserved]					
m. 3.1	36.3–113.5	Tylosin + Hygromycin B	4–50 8–12	For replacement chickens; as tylosin phosphate.	§ 121.213(d), table 1, item 1, and growth promotion and feed efficiency.
n. 3.1	36.3–113.5	Tylosin + penicillin.	3.2–50	For replacement chickens; in combination ratio of 1.2 parts of penicillin to 2 parts of tylosin; as tylosin phosphate plus procaine penicillin.	Growth promotion and feed efficiency.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein, except that the label of the complete feed need not bear the quantities of the antibiotic drugs added solely for growth promotion.

NOTE: § 121.207(d)(2) was amended to read "A statement of the quantity or quantities contained therein" by an order published in the FEDERAL REGISTER on March 20, 1965, 30 F.R. 3707, effective January 1, 1966. The effective date of this amendment was stayed by an order published in the FEDERAL REGISTER on September 28, 1965, 30 F.R. 12353, pending resolution of issues at a public hearing.

(3) Adequate directions and warnings for use, including a statement that such feeds may not be fed to laying birds.

§ 121.208 Chlortetracycline.

The food additive chlortetracycline may be safely used in accordance with the following prescribed conditions:

(a) Chlortetracycline is the antibiotic substance produced by growth of Streptomyces aureofaciens or the same antibiotic substance produced by any other means and, for the purpose of this section, refers to chlortetracycline or feed grade chlortetracycline as the specified salt.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of chlortetracycline alone and with certain other additives in medicated feeds are described in tabular form in this section, and the tables are to be read as follows:

(1) Where the principal ingredient is the sole medicament, the required limitations and indications for use are found on the same line entry.

(2) Where the principal ingredient is combined with a secondary ingredient, the required limitations and indications for use for the secondary ingredient are found on the same line entry. The required limitations and indications for use of the principal ingredient at the designated concentration are found on the line entry for the principal ingredient alone, and both sets of applicable limitations and indications for use shall apply. If duplicate limitations occur, they may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of greater value than any other additives named in this section.

(d) It is used or intended for use as follows:

TABLE 1—CHLORTETRACYCLINE IN COMPLETE CHICKEN AND TURKEY FEEDS

Principal ingredient	Gm. per ton	Combined with—	Gm. per ton	Limitations	Indications for use
1. Chlortetracycline	50-100			For chickens and turkeys; as chlortetracycline hydrochloride.	During times of stress, for prevention of diseases named in this section caused by organisms susceptible to the indicated levels of the chlortetracycline salt.
2. Chlortetracycline	50-100			For chickens; as chlortetracycline hydrochloride.	Prevention of chronic respiratory disease (air-sac infection).
a. Chlortetracycline	50-100	Amprolium	36.3-227 (0.004%-0.025%).	For chickens; not for laying chickens; as prescribed in § 121.210(c), table 1, items 2.1, 2.2, or 3.1.	§ 121.210(c), table 1, item 2.1, 2.2, or 3.1.
b. Chlortetracycline	50-100	Hygromycin B	8-12	For chickens	Control of infestation of large roundworms (*Ascaris galli*), cecal worms (*Heterakis gallinae*), and capillary worms (*Capillaria obsignata*).
c. Chlortetracycline	50-100	Zoalene	36.3-113.5 (0.004%-0.0125%)	For chickens; not to be fed to laying chickens; as prescribed in § 121.207(c), table 1, item 2.1 or 3.1.	As prescribed in § 121.207(c), table 1, item 2.1 or 3.1.
d. Chlortetracycline	50-100	Reserpine	.908 (0.0001%)	For chickens; as prescribed in § 121.205(c), table 1, item 1.	§ 121.205(c), table 1, item 1.
e. Chlortetracycline	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For chickens; as prescribed in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
3. Chlortetracycline	50-100			For turkeys; as chlortetracycline hydrochloride.	Prevention of infectious sinusitis, hexamitiasis.
a. Chlortetracycline	50-100	Reserpine	0.182-0.908 (0.00002%-0.0001%)	For turkeys over 4 weeks of age; as prescribed in § 121.205(c), table 2, items 1, 2.	§ 121.205(c), table 2, items 1, 2.
b. Chlortetracycline	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For turkeys; as prescribed in § 121.262(c), table 1, item 2.1.	§ 121.262(c), table 1, item 2.1.
4. Chlortetracycline	50-100			For laying chickens; as chlortetracycline hydrochloride.	Maintaining or increasing egg production or hatchability of eggs.
a. Chlortetracycline	50-100	Hygromycin B	8-12	For laying chickens	Control of infestation of large roundworms (*Ascaris galli*), cecal worms (*Heterakis gallinae*), and capillary worms (*Capillaria obsignata*).
5. Chlortetracycline	50-100			For chicks; as chlortetracycline hydrochloride.	Prevention of early mortality due to organisms susceptible to chlortetracycline.
a. Chlortetracycline	50-100	Amprolium	36.3-227 (0.004%-0.025%)	For chicks; as prescribed in § 121.210(c), table 1, items 2.1, 2.2, or 3.1.	§ 121.210(c), table 1, item 2.1, 2.2, or 3.1.
b. Chlortetracycline	50-100	Hygromycin B	8-12	For chicks	Control of infestation of large roundworms (*Ascaris galli*), cecal worms (*Heterakis gallinae*), and capillary worms (*Capillaria obsignata*).
c. Chlortetracycline	50-100	Zoalene	36.3-113.5 (0.004%-0.0125%)	For chicks; as prescribed in § 121.207(c), table 1, item 2.1 or 3.1.	As prescribed in § 121.207(c), table 1, item 2.1 or 3.1.
6. Chlortetracycline	100-200			For chickens; not to be fed to laying chickens; as chlortetracycline hydrochloride.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis); prevention of synovitis.
a. Chlortetracycline	100-200	Amprolium	36.3-227 (0.004%-0.025%)	For chickens; not for laying chickens; as prescribed in § 121.210(c), table 1, items 2.1, 2.2, or 3.1.	§ 121.210(c), table 1, item 2.1, 2.2, or 3.1.
b. Chlortetracycline	100-200	Hygromycin B	8-12	For chickens	Control of infestation of large roundworms (*Ascaris galli*), cecal worms (*Heterakis gallinae*), and capillary worms (*Capillaria obsignata*).
c. Chlortetracycline	100-200	Reserpine	0.908 (0.0001%)	For broilers	Improve productive performance under stressful environmental conditions.
d. Chlortetracycline	100-200	Zoalene	36.3-113.5 (0.004%-0.0125%)	For chickens; as prescribed in § 121.207(c), table 1, item 2.1 or 3.1.	As prescribed in § 121.207(c), table 1, item 2.1 or 3.1.
e. Chlortetracycline	100-200	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For chickens; as prescribed in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
7. Chlortetracycline	100-200			For turkeys; as chlortetracycline hydrochloride.	Treatment of blue comb (nonspecific infectious enteritis, mud fever), infectious sinusitis, hexamitiasis; prevention of synovitis.

TABLE 1—CHLORTETRACYCLINE IN COMPLETE CHICKEN AND TURKEY FEEDS—Continued

Principal ingredient	Gm. per ton	Combined with—	Gm. per ton	Limitations	Indications for use
7. Cholortetracycline—Continued					
a. Chlortetracycline	100-200	Reserpine	0.182-0.908 (0.00002%-0.0001%)	For turkeys over 4 weeks of age; as prescribed in § 121.205(c), table 2, items 1, 2.	§ 121.205(c), table 2, items 1, 2.
b. Chlortetracycline	100-200	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For turkeys; as prescribed in § 121.262(c), table 1, item 2.1.	§ 121.262(c), table 1, item 2.1.
8. Chlortetracycline	100-200			For chickens; not to be fed to laying chickens; as chlortetracycline hydrochloride, as follows: In low-calcium feed containing 0.8 percent dietary calcium, not to be fed continuously for more than 8 weeks; in low-calcium feed containing 0.40 percent to 0.55 percent dietary calcium, not to be fed continuously for more than 5 days; in low-calcium feed containing 0.8 percent dietary calcium and 1 percent to 1.5 percent sodium sulfate, to be fed continuously for not more than the first 3 weeks of life.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis); prevention of synovitis.
9. Chlortetracycline	200			For chickens; not to be fed to laying chickens; as chlortetracycline hydrochloride, as follows: In low-calcium feed containing 0.8 percent dietary calcium, not to be fed continuously for more than 8 weeks; in low-calcium feed containing 0.8 percent dietary calcium and 1.0 percent to 1.5 percent sodium sulfate, to be fed continuously for not more than the first 3 weeks of life.	Prevention and control of coccidiosis caused by *E. necatrix* and *E. tenella*.
10. Chlortetracycline	200			For chickens; not to be fed to laying chickens; as chlortetracycline hydrochloride; in low-calcium feed containing 0.4% to 0.55% dietary calcium, not to be fed continuously for more than 5 days.	Treatment of coccidiosis caused by *E. necatrix* and *E. tenella*.
11. Chlortetracycline	200			For chickens; not to be fed to laying chickens; as chlortetracycline hydrochloride.	Control of synovitis.
a. Chlortetracycline	200	Hygromycin B	8-12	For chickens; not to be fed to laying chickens.	Control of infestation of large roundworms (*Ascaris galli*), cecal worms (*Heterakis gallinae*), and capillary worms (*Capillaria obsignata*).
b. Chlortetracycline	200	Reserpine	0.908 (0.0001%)	For broiler chickens	Improve performance under stressful environmental conditions
c. Chlortetracycline	200	Zoalene	36.3-113.5 (0.004%-0.0125%)	For chickens; as prescribed in § 121.207(c), table 1, item 2.1 or 3.1.	As prescribed in § 121.207(c), table 1, item 2.1 or 3.1.
12. Chlortetracycline	200			For turkeys; as chlortetracycline hydrochloride.	Control of synovitis.
a. Chlortetracycline	200	Reserpine	0.182-0.908 (0.00002%-0.0001%)	For turkeys over 4 weeks of age; as prescribed in § 121.205(c), table 2, items 1, 2.	§ 121.205(c), table 2, items 1, 2.
13. Chlortetracycline	400			For turkey poults not over 4 weeks of age; in low calcium feed containing 1 percent total calcium with not less than 0.45 percent calcium from calcium sulfate; as chlortetracycline hydrochloride.	Aid in reducing mortality due to paratyphoid caused by *Salmonella typhimurium*.

TABLE 2—CHLORTETRACYCLINE IN COMPLETE SWINE FEED

Principal ingredient	Quantity	Combined with—	Quantity	Limitations	Indications for use
	Grams per ton		*Grams per ton*		
1. Chlortetracycline [1]	50-100			As chlortetracycline hydrochloride.	Maintenance of weight gain in the presence of atrophic rhinitis; reduction of the incidence of cervical abscesses; prevention of bacterial swine enteritis; prevention of bacterial swine enteritis during times of stress.
a. Chlortetracycline	50-100	Hygromycin B	12	Withdraw 48 hours prior to slaughter.	Control of infestation of large roundworms (*Ascaris suis*), nodular worms (*Oesophagostomum dentatum*), and whipworms (*Trichuris suis*).
2. Chlortetracycline [1]	100	Penicillin, sulfamethazine.	50 100	For swine not over 75 pounds in body weight; withdraw 5 days prior to slaughter; as procaine penicillin and chlortetracycline hydrochloride.	Reduction of the incidence of cervical abscesses; treatment of bacterial swine enteritis; prevention of these diseases during times of stress; growth promotion and feed efficiency, and maintenance of weight gain in the presence of atrophic rhinitis.
3. Chlortetracycline [1]	100-200			As chlortetracycline hydrochloride.	Treatment of bacterial swine enteritis.
a. Chlortetracycline	100-200	Hygromycin B	12	Withdraw 48 hours prior to slaughter.	Control of infestation of large roundworms (*Ascaris suis*), nodular worms (*Oesophagostomum dentatum*), and whipworms (*Trichuris suis*).
4. Chlortetracycline	200			Sole medication; as chlortetracycline hydrochloride.	As an aid in reducing spread of leptospirosis.
5. Chlortetracycline	400			To be fed for 14 days as sole medication; as chlortetracycline hydrochloride.	As an aid in reducing shedding of leptospirae; as an aid in reducing the abortion rate of swine and the mortality rate of newborn pigs when leptospirosis is present.

[1] See also § 121.200(c)(1).

TABLE 3—CHLORTETRACYCLINE IN FEED FOR OTHER ANIMALS

Principal ingredient	Quantity	Limitation	Indications for use
1. Chlortetracycline	10 mg. per gm. of mash.	As chlortetracycline hydrochloride; for parrots, macaws, cockatoos.	Treatment of psittacine birds suspected or known to be infected with psittacosis.

TABLE 4—CHLORTETRACYCLINE IN DRINKING WATER FOR CHICKENS AND TURKEYS

Principal ingredient	Quantity	Limitation	Indications for use
1. Chlortetracycline	100 mg. per gal.	For chickens; as chlortetracycline hydrochloride or chlortetracycline bisulfate; not to be used for more than 14 consecutive days; as sole source of chlortetracycline.	Prevention of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis).
2. Chlortetracycline	do.	For turkeys; as chlortetracycline hydrochloride or chlortetracycline bisulfate; not to be used for more than 14 consecutive days; as sole source of chlortetracycline.	Prevention of blue comb (nonspecific infectious enteritis, mud fever); infectious sinusitis, hexamitiasis.
3. Chlortetracycline	200 mg. per gal.	For chickens; as chlortetracycline hydrochloride or chlortetracycline bisulfate; not to be used for more than 14 consecutive days; as sole source of chlortetracycline.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis); prevention of synovitis.
4. Chlortetracycline	do.	For turkeys; as chlortetracycline hydrochloride or chlortetracycline bisulfate; not to be used for more than 14 consecutive days; as sole source of chlortetracycline.	Treatment of blue comb (nonspecific infectious enteritis, mud fever), infectious sinusitis, hexamitiasis; prevention of synovitis.
5. Chlortetracycline	400 mg. per gal.	For chickens and turkeys as chlortetracycline hydrochloride or chlortetracycline bisulfate; not for laying chickens; not to be used for more than 14 consecutive days; as sole source of chlortetracycline.	Control of synovitis.
6. Chlortetracycline	1000 mg. per gal.	For growing chickens; as chlortetracycline hydrochloride or chlortetracycline bisulfate; not for laying chickens; not to be used for more than 14 consecutive days; withdraw 24 hours prior to slaughter; as sole source of chlortetracycline.	Aid in the control of mortality due to fowl cholera.

TABLE 5—MISCELLANEOUS

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
1. Chlortetracycline	250 mg. per tablet.			In tablets for oral ingestion by calves; as sole source of chlortetracycline; 250 mg. per 100 lb. of animal weight per day for 3 days; do not administer within 24 hr. of slaughter; as chlortetracycline hydrochloride.	Treatment of bacterial scours in calves.
2. Chlortetracycline	250 mg. per tablet.			In tablets for oral ingestion by calves; as sole source of chlortetracycline; 250 mg. per animal per day for not more than 3 days; as chlortetracycline hydrochloride; do not administer within 24 hr. of slaughter.	Prevention of bacterial scours in new-born calves.
3. Chlortetracycline	125 mg. per tablet.	Neomycin	125 mg. per tablet.	In tablets for oral ingestion by calves; as sole source of chlortetracycline and neomycin; 125 mg. of chlortetracycline with 125 mg. of neomycin per 100 lb. of animal weight per day for 3 days; do not administer within 24 hr. of slaughter; as chlortetracycline hydrochloride and neomycin sulfate.	Treatment of bacterial scours in calves.
4. Chlortetracycline	125 mg. per tablet.	Sulfamethazine	2.5 gm. per tablet.	In tablets for oral ingestion by calves; as sole source of chlortetracycline and sulfamethazine; 125 mg. of chlortetracycline with 2.5 gm. of sulfamethazine per 100 lb. of animal weight per day for 3 days; do not administer within 5 days of slaughter for food; as chlortetracycline hydrochloride.	Treatment of bacterial scours in calves.

TABLE 6—CHLORTETRACYCLINE IN CATTLE FEED

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
	Mg. per head per day		*Mg. per head per day*		
1. Chlortetracycline	70			For feed-lot beef cattle.	Aid in prevention of liver abscesses.
a. Chlortetracycline	70	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
2. Chlortetracycline	70			For beef cattle up to 700 pounds in weight.	Aid in reduction of bacterial diarrhea; aid in prevention of foot rot.
a. Chlortetracycline	70	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
3. Chlortetracycline	100			For beef cattle over 700 pounds in weight.	Aid in reduction of bacterial diarrhea; aid in prevention of foot rot.
a. Chlortetracycline	100	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
4. Chlortetracycline	350			For beef cattle; not to be administered within 48 hours of slaughter.	Aid in prevention of bacterial pneumonia and shipping fever (hemorrhagic septicemia); aid in reduction of losses due to respiratory infection (infectious rhinotracheitis-shipping fever complex).
a. Chlortetracycline	350	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
5. Chlortetracycline	350			For beef cattle up to 700 pounds in weight; not to be administered within 48 hours of slaughter.	Aid in prevention of anaplasmosis.
a. Chlortetracycline	350	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
6. Chlortetracycline	500			For beef cattle 700-1,000 pounds in weight. Not to be administered within 48 hours of slaughter.	Aid in prevention of anaplasmosis.
a. Chlortetracycline	500	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
7. Chlortetracycline	750			For beef cattle 1,000-1,500 pounds in weight. Not to be administered within 48 hours of slaughter.	Aid in prevention of anaplasmosis.
a. Chlortetracycline	750	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
8. Chlortetracycline	0.5 (mg. per pound of body weight per day).			For beef cattle over 1,500 pounds in weight. Not to be administered within 48 hours of slaughter.	Aid in prevention of anaplasmosis.
a. Chlortetracycline	0.5 (mg. per pound of body weight per day).	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.
9. Chlortetracycline	5.0 (milligrams per pound of body weight per day).			For beef cattle and nonlactating dairy cows; feed for 60 days; for use in the carrier state only; not to be fed within 10 days of slaughter; from a concentrate containing not less than 2.0 grams of chlortetracycline per pound. Labeling shall include a statement that a positive complement-fixation test at conclusion of a 60-day feeding period does not necessarily establish that anaplasmosis carrier state is still active. To positively establish that the carrier state has been eliminated, inject blood from a suspected carrier into a splenectomized (susceptible) calf.	Aid in the elimination of the carrier state of anaplasmosis.

(e) To assure safe use, the label and labeling of the additive, any combination of the additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein, except that the label of the complete feed need not bear the quantities of the antibiotic drugs added solely for growth promotion.

NOTE: § 121.208(e)(2) was amended to read "A statement of the quantity or quantities contained therein" by an order published in the FEDERAL REGISTER on March 20, 1965, 30 F.R. 3707, effective January 1, 1966. The effective date of this amendment was stayed by an order published in the FEDERAL REGISTER on September 28, 1965, 30 F.R. 12353, pending resolution of issues at a public hearing.

(3) Adequate directions and warnings for use.

§ 121.209 Ronnel.

The food additive ronnel (*O,O*-dimethyl *O*-(2,4,5-trichlorophenyl) phosphorothioate) may be safely used in animal feed in accordance with the following prescribed conditions:

(a) In the feed of beef cattle and dairy heifers as follows:

	Quantity	Limitations	Indications for use
1. In feed concentrate:	*Percent in feed concentrate*		
a.	0.26	For beef cattle and dairy heifers: Feed concentrate 0.3 lb. per 100 lb. of animal weight per day for 14days; withdraw from dairy heifers 28 days before calving; withdraw 28 days prior to slaughter; not to be fed to dairy cows.	Control of grubs.
b.	0.6	For beef cattle and dairy heifers: Feed concentrate 0.3 lb. per 100 lb. of animal weight per day for 7 days; withdraw from dairy heifers 60 days before calving; withdraw 60 days prior to slaughter; not to be fed to dairy cows.	Control of grubs; aid in the control of cattle lice, when the drug is used for cattle grub control.
	Percent in block or granular concentrate		
2. In mineral concentrate	5.5	For beef cattle and dairy heifers: Feed block or granular concentrate 0.25 lb. per 100 lb. of animal weight per month for not less than 75 days; withdraw from dairy heifers 21 days before calving; withdraw 21 days prior to slaughter; not to be fed to dairy cows.	Control of grubs and horn flies.

(b) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities of each contained therein.

(3) Adequate directions and warnings for use, which shall also include the following:

(i) A statement that the ronnel-medicated feed concentrate shall be thoroughly mixed with the daily feed ration.

(ii) A statement that ronnel-medicated feed or block concentrate is to be used as the sole source of ronnel medication.

§ 121.210 Amprolium.

The food additive amprolium (1-(4-amino-2-n-propyl-5-pyrimidinylmethyl)-2-picolinium chloride hydrochloride) may be safely used in accordance with the following prescribed conditions:

(a) The antibiotic activities authorized are expressed in terms of the weight of the appropriate antibiotic standard.

(b) Permitted uses of amprolium alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament, alone, or with an additional ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredients. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredients and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredients may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(c) It is used or intended for use in drinking water and in feeds which do not contain bentonite, as follows:

TABLE 1—AMPROLIUM IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Amprolium	113.5-227 (0.0125%-0.025%).			For turkeys	Prevention of coccidiosis.
a. 1.1	113.5-227	Penicillin	2.4-50	For turkeys; as procaine penicillin.	Growth promotion and feed efficiency.
b. 1.1	113.5-227	Penicillin plus bacitracin.	3.6-50	For turkeys; not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. 1.1	113.5-227	Penicillin plus streptomycin.	14.4-50	For turkeys; not less than 2.4 gm. of penicillin nor less than 12 gm. of streptomycin; as procaine penicillin plus streptomycin sulfate.	Do.
d. 1.1	113.5-227	Streptomycin	30-50	For turkeys; as streptomycin sulfate.	Growth promotion and feed efficiency.
e. 1.1	113.5-227	Bacitracin	4-50	For turkeys; as bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. 1.1	113.5-227	Chlortetracycline.	10-50	For turkeys; as chlortetracycline hydrochloride.	Do.
g. 1.1	113.5-227	Penicillin plus streptomycin.	90-180	For turkeys; § 121.256(d) table 1, item 7.1.	§ 121.256(d), table 1, item 7.1.
h. 1.1	113.5-227	Oxytetracycline	50-200	§ 121.251(d), table 1, items 1, 3, 4, 5, 7, 11.	§ 121.251(d), table 1, items 1, 3, 4, 5, 7, 11.
i. 1.1	113.5-227	Arsanilic acid	90 (0.01%)	For turkeys; withdraw 5 days before slaughter.	Growth promotion and feed efficiency; improving pigmentation.
j. 1.1	113.5-227	Sodium arsanilate.	90 (0.01%)	do	Do.
k. 1.1	113.5-227	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	§ 121.262, table 1, item 1.3.	§ 121.262, table 1, item 1.3.
2.1 Amprolium	113.5-227 (0.0125%-0.025%).			For broiler chickens; not for laying chickens.	Prevention of coccidiosis.
2.2 Amprolium	113.5-227 (0.0125%-0.025%).	Ethopabate	3.6	do	Do.
2.3 Amprolium	113.5-227 (0.0125%-0.025%)	Arsanilic acid	90 (0.01%)	For broiler chickens; not for laying chickens; withdraw 5 days before slaughter.	Prevention of coccidiosis; growth promotion and feed efficiency; improving pigmentation.
2.4 Amprolium	113.5-227 (0.0125%-0.025%)	Ethopabate	3.6 (0.0004%)	do	Do.
		+ Arsanilic acid	90 (0.01%)		
a. 2.1, 2.2, 2.3, or 2.4.	113.5-227	Penicillin	2.4-50	For broiler chickens; as procaine penicillin.	Growth promotion and feed efficiency

TABLE 1—AMPROLIUM IN COMPLETE CHICKEN AND TURKEY FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
2.4 Amprolium—Continued b. 2.1 or 2.2	113.5-227	Penicillin plus bacitracin.	3.6-50	For broiler chickens; not for laying chickens; not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Growth promotion and feed efficiency.
c. 2.1, 2.2, 2.3, or 2.4.	113.5-227	Penicillin+streptomycin.	14.4-50	For broiler chickens; as procaine penicillin plus streptomycin sulfate; 14.4-50 gm. of combination containing 16.7% of penicillin.	Do
d. 2.1 or 2.2	113.5-227	Streptomycin	30-50	For broiler chickens; not for laying chickens; as streptomycin sulfate.	Do.
e. 2.1 or 2.2	113.5-227	Bacitracin	4-50	For broiler chickens; not for laying chickens; as bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. 2.1 or 2.2	113.5-227	Chlortetracycline.	10-50	For broiler chickens; not for laying chickens; as chlortetracycline hydrochloride.	Do.
g. 2.1 or 2.2	113.5-227	Bacitracin	50-100	For broiler chickens; not for laying chickens; as bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Prevention of chronic respiratory disease (air-sac infection) and blue comb (nonspecific infectious enteritis).
h. 2.1 or 2.2	113.5-227	do	100-200	do	Treatment of chronic respiratory disease (air-sac infection) and blue comb (nonspecific infectious enteritis).
i. 2.1 or 2.2	113.5-227	Chlortetracycline.	50-200	For broiler chickens; not for laying chickens; as prescribed in § 121.208(d), table 1, items 1, 2, 5, 6.	§ 121.208(d), table 1, items 1, 2, 5, 6.
j. 2.1 or 2.2	113.5-227	Penicillin plus streptomycin.	90-180	For broiler chickens; not for laying chickens; § 121.256(d), table 1, item 5.1.	§ 121.256(d), table 1, item 5.1.
k. 2.1 or 2.2	113.5-227	Penicillin plus streptomycin.	90-180	For chicks; § 121.256 (d), table 1, item 8.1	§ 121.256(d), table 1, item 8.1.
l. 2.1	113.5-227	Oxytetracycline	50-200	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.
m. 2.1	113.5-227	Tylosin	4-50	As tylosin phosphate	Growth promotion and feed efficiency.
n. 2.1	113.5-227	Sodium arsanilate.	90 (0.01%)	do	Growth promotion and feed efficiency; improving pigmentation.
o. 2.1	113.5-227	Oleandomycin	2	For broiler chickens; not for laying chickens; regulation limited to holders of approved new-drug applications.	Growth promotion and feed efficiency.
2.4 Amprolium—Continued p. 2.1	113.5-227	Tylosin+penicillin.	3.2-50	For broiler chickens; 3.2-50 gm. of combination containing a ratio of 1.2 parts of penicillin to 2 parts of tylosin; as procaine penicillin +tylosin phosphate.	Growth promotion and feed efficiency.
q. 2.1	113.5-227	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	§ 121.262, table 1, item 1.1.	§ 121.262, table 1, item 1.1.
r. 2.1	113.5-227	Hygromycin B	8-12		§ 121.213(d), table 1 item 1.
3.1 Amprolium	36.3-113.5 (.004%-.0125%).			For replacement chickens; not for laying chickens, as follows:	Development of active immunity to coccidiosis.

Growing conditions	Amount of amprolium in feed for birds, by age groupe		
	Up to 5 weeks of age	From 5 to 8 weeks of age	From 8 to 14 weeks of age
	Grams per ton	*Grams per ton*	*Grams per ton*
Severe exposure to coccidiosis.	113.5 (0.0125%)	72.6-113.5 (0.008%-0.0125%)	36.3-113.5 (0.004%-0.0125%)
Moderate exposure to coccidiosis.	72.6-113.5 (0.008%-0.0125%)	54.5-113.5 (0.006%-0.0125%)	36.3-113.5 (0.004%-0.0125%)
Slight exposure to coccidiosis.	36.3-113.5 (0.004%-0.0125%)	36.3-113.5 (0.004%-0.0125%)	36.3-113.5 (0.004%-0.0125%)

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3.2 Amprolium	36.3-113.5 (0.004%-0.0125%)	Arsanilic acid	90 (0.01%)	For replacement chickens; as specified in item 3.1 of this table; not for laying chickens; withdraw 5 days before slaughter.	Development of active immunity to coccidiosis; growth promotion and feed efficiency; improving pigmentation.
3.3 Amprolium	36.3-113.5 (0.004%-0.0125%)	Sodium arsanilate.	90 (0.01%)	For replacement chickens; as specified in item 3.1 of this table; not for laying chickens; withdraw 5 days before slaughter.	Do.
a. 3.1 or 3.2	36.3-113.5	Penicillin	2.4-50	For replacement chickens; not for laying chickens; as procaine penicillin.	Growth promotion and feed efficiency.
b. 3.1	36.3-113.5	Penicillin plus bacitracin.	3.6-50	For replacement chickens; not for laying chickens; not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.

TABLE 1—AMPROLIUM IN COMPLETE CHICKEN AND TURKEY FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3.3 Amprolium—Continued					
c. 3.1 or 3.2	36.3–113.5	Penicillin plus streptomycin.	14.4–50	As procaine penicillin plus streptomycin sulfate; 14.4–50 gm. of combinations containing 16.7 percent of penicillin.	Growth promotion and feed efficiency.
d. 3.1	36.3–113.5	Streptomycin	30–50	For replacement chickens; not for laying chickens; as streptomycin sulfate.	Do.
e. 3.1	36.3–113.5	Bacitracin	4–50	For replacement chickens; not for laying chickens; as bacitracin, bacitracin methylene disalicylate, maganese bacitracin, or zinc bacitracin.	Do.
f. 3.1	36.3–113.5	Chlortetracycline	10–50	For replacement chickens; not for laying chickens; as chlortetracycline hydrochloride.	Do.
g. 3.1	36.3–113.5	Bacitracin	50–100	For replacement chickens; not for laying chickens; as bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Prevention of chronic respiratory disease (airsac infection) and blue comb (nonspecific infectious enteritis).
h. 3.1	36.3–113.5	do	100–200	do	Treatment of chronic respiratory disease (airsac infection) and blue comb (nonspecific infectious enteritis).
i. 3.1	36.3–113.5	Chlortetracycline	50–200	For replacement chickens; not for laying chickens; as prescribed in § 121.208(d), table 1, items 1, 2, 5, 6.	§ 121.208(d), table 1, items 1, 2, 5, 6.
j. 3.1	36.3–113.5	Penicillin plus streptomycin.	90–180	For replacement chickens; not for laying chickens; § 121.256(d), table 1, item 5.1.	§ 121.256(d), table 1, item 5.1.
k. 3.1	36.3–113.5	Penicillin plus streptomycin.	90–180	For chicks; § 121.256(d), table 1, item 8.1.	§ 121.256(d), table 1 item 8.1.
l. 3.1	36.3–113.5	Oxytetracycline	50–200	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.	§ 121.251(d), table 1, items 1, 2, 4, 6, 8, 9, 10, 12.
m. [Reserved]					
n. [Reserved]					
o. 3.1	36.3–113.5	Oleandomycin	2	For replacement chickens; not for laying chickens; regulation limited to holders of approved new-drug applications.	Growth promotion and feed efficiency.
p. 3.1	36.3–113.5	Tylosin+penicillin.	3.2–50	For replacement chickens; not for laying chickens; 3.2–50 gm. of combination containing a ratio of 1.2 parts of penicillin to 2 parts of tylosin; as procaine penicillin +tylosin phosphate.	Do.
q. 3.1	36.3–113.5	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	§ 121.262, table 1, item 1.1.	§ 121.262, table 1 item 1.1
r. 3.1	36.3–113.5	Tylosin	4–50	As tylosin phosphate	Growth promotion and feed efficiency.
s. 3.1	36.3–113.5	Hygromycin B	8–12		§ 121.213(d), table 1, item 1.

TABLE 2—AMPROLIUM IN DRINKING WATER FOR CHICKENS

Principal ingredient	Quantity	Limitation	Indications for use
Amprolium	0.006%–0.024%	In chicken drinking water; as sole source of amprolium; not for laying chickens.	Treatment of coccidiosis.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein, except that the label of the complete feed need not bear the quantities of the antibiotic drugs added solely for growth promotion.

NOTE: § 121.210(d)(2) was amended to read "A statement of the quantity or quantities contained therein" by an order published in the FEDERAL REGISTER on March 20, 1965, 30 F.R. 3707, effective January 1, 1966. The effective date of this amendment was stayed by an order published in the FEDERAL REGISTER on September 28, 1965, 30 F.R. 12353, pending resolution of issues at a public hearing.

(3) Adequate directions and warnings for use, including a statement that such feeds may not be fed to laying birds.

(e) Section 121.1022 establishes the limitation for residues of the additive in food for human consumption.

§ 121.211 Ethion (*O,O,O′,O′*-tetraethyl *S,S′*-methylene bisphosphorodithioate).

A tolerance of 10 parts per million is established for residues of the insecticide ethion in dehydrated citrus pulp for cattle feed when present therein as a result of the application of the pesticide to the growing agricultural crop.

§ 121.212 Novobiocin.

The food additive novobiocin may be safely used in accordance with the following prescribed conditions:

(a) Novobiocin is the antibiotic substance produced by growth of *Streptomyces niveus* or the same antibiotic substance produced by any other means.

(b) The antibiotic activity authorized is expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) It is used or intended for use as follows:

NOVOBIOCIN IN CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Limitations	Indications for use
1. Novobiocin	200	For chickens; not for laying chickens; feed 5 to 7 days; withdraw 4 days prior to slaughter.	Aid in the treatment of breast blisters associated with staphylococcic infections.
2. Novobiocin	200	For turkeys; feed 5 to 7 days; withdraw 4 days prior to slaughter.	Do.
3. Novobiocin	350	For chickens; not for laying chickens; feed 5 to 7 days; withdraw 4 days prior to slaughter.	Treatment of staphylococcic infections and staphylococcic synovitis (infectious arthritis).
4. Novobiocin	350	For turkeys; feed 5 to 7 days; withdraw 4 days prior to slaughter.	Do.

(d) To assure safe use, the label and labeling of the additive, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive.

(2) A statement of the quantity contained therein.

(3) Adequate directions and warnings for use.

§ 121.213 Hygromycin B.

The food additive hygromycin B may be safely used in animal feed in accordance with the following prescribed conditions:

(a) Hygromycin B is the antibiotic substance produced by growth of *Streptomyces hygroscopicus* or the same antibiotic substance produced by any other means.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of hygromycin B alone and with certain other additives in medicated feeds are described in tabular form in this section. These tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with another ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the principal ingredient. Where principal and secondary ingredients have been mixed, the applicable "limitations" and "indications for use" from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with one or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient or principal ingredient combination indicated by the cross-reference is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section but may include other ingredients listed as numbered line items. Such term is not intended to imply that the ingredient or combination is of greater value than any other additives named in this section.

(d) The additive is used or intended for use as follows:

TABLE 1—HYGROMYCIN B IN COMPLETE CHICKEN FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Hygromycin B	8-12				Control of infestation of large roundworms (*Ascaris galli*), cecal worms (*Heterakis gallinae*) and capillary worms (*Capillaria obsignata*).
a. Hygromycin B.	8-12	Penicillin	2.4-50	As procaine penicillin	Growth promotion and feed efficiency.
b. Hygromycin B.	8-12	Penicillin plus bacitracin.	3.6-50	Not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin nor more than 50 gm. in combination; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.

TABLE 1—HYGROMYCIN B IN COMPLETE CHICKEN FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Hygromycin B—Continued					
c. Hygromycin B.	8-12	Penicillin plus streptomycin.	14.4-50	Not less than 2.4 gm. of penicillin nor less than 12 gm. of streptomycin nor more than 50 gm. in combination; as procaine penicillin plus streptomycin sulfate.	Growth promotion and feed efficiency.
d. Hygromycin B.	8-12	Penicillin + tylosin.	3.2-50	3.2-50 gm. of combination containing a ratio of 1.2 parts of penicillin to 2 parts of tylosin; as procaine penicillin plus tylosin phosphate.	Do.
e. Hygromycin B.	8-12	Bacitracin	4-50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. Hygromycin B.	8-12	Streptomycin	30-50	As streptomycin sulfate	Do.
g. Hygromycin B.	8-12	Chlortetracycline.	10-50	As chlortetracycline hydrochloride.	Do.
h. Hygromycin B.	8-12	Penicillin	50-100	§ 121.256(d), table 1, items 3.1, 9.1.	§121.256(d), table 1, items 3.1, 9.1.
i. Hygromycin B.	8-12	Penicillin + bacitracin.	10-200	§ 121.256(d), table 1, items 1.1, 3.2, 10.1, 11.1, 13.1, 16.1.	§ 121.256(d), table 1, items 1.1, 3.2, 10.1, 11.1, 13.1, 16.1.
j. Hygromycin B.	8-12	Penicillin + streptomycin	22.5-150	§ 121.256(d), table 1, items 2.1, 5.1, 6.1, 8.1.	§ 121.256(d), table 1 items 2.1, 5.1, 6.1, 8.1.
k. Hygromycin B.	8-12	Bacitracin	10-100	§ 121.232(d), items 1.1, 2.1, 4.1; § 121.233(d), items 1.1, 2.1, 4.1; § 121.252(d), items 1.1, 2.1, 4.1.	§ 121.232(d), items 1.1, 2.1, 4.1; § 121.233(d), items 1.1, 2.1, 4.1; § 121.252(d), items 1.1, 2.1, 4.1.
l. Hygromycin B.	8-12	Bacitracin	100	As bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis).
m. Hygromycin B.	8-12	Bacitracin	100	For chicks, in starter ration: as bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Prevention of early mortality of chicks due to organisms susceptible to the named bacitracin compound.
n. Hygromycin B.	8-12	Chlortetracycline.	50-200	§ 121.208(d), table 1, items 1, 2, 4, 5, 6, 11.	§ 121.208(d), table 1, items 1, 2, 4, 5, 6, 11.
o. Hygromycin B.	8-12	Amprolium	36.3-227	Not for laying chickens; as prescribed in § 121.210(c), table 1, item 2.1 or 3.1.	§ 121.210(c), table 1, item 2.1 or 3.1.
p. Hygromycin B.	8-12	Zoalene	36.3-113.5	Not for laying chickens; as prescribed in § 121.207(c), item 2.1 or 3.1.	§ 121.207(c), item 2.1 or 3.1.
q. Hygromycin B.	8-12	Tylosin	4-50	As tylosin phosphate	Growth promotion and feed efficiency.
r. Hygromycin B.	8-12	Zoalene + tylosin + penicillin.	36.3-113.5 3.2-50	Not for laying chickens; in combination ratio of 1.2 parts of penicillin to 2 parts of tylosin; as tylosin phosphate plus procaine penicillin; § 121.207(c), item 2.1 or 3.1.	§ 121.207(c), item 2.1 or 3.1 and growth promotion and feed efficiency.
s. Hygromycin B.	8-12	Zoalene + tylosin	36.3-113.5 4-50	Not for laying chickens; as tylosin phosphate; § 121.207(c), item 2.1 or 3.1.	§ 121.207(c), item 2.1 or 3.1, and growth promotion and feed efficiency.

TABLE 2—HYGROMYCIN B IN COMPLETE SWINE FEED

<table>
<tr><th>Principal ingredient</th><th>Grams per ton</th><th>Combined with—</th><th>Grams per ton</th><th>Limitations</th><th>Indications for use</th></tr>
<tr><td>1. Hygromycin B</td><td>12</td><td></td><td></td><td>For swine; withdraw 48 hours prior to slaughter.</td><td>Control of infestation of large roundworms (<i>Ascaris suis</i>), nodular worms (<i>Oesophagostomum dentatum</i>), and whipworms (<i>Trichuris suis</i>).</td></tr>
<tr><td>a. Hygromycin B</td><td>12</td><td>Tylosin</td><td>10-100</td><td>For swine; as tylosin phosphate; continuous, as follows:
<table>
<tr><th>Animal weight</th><th>Amount of tylosin in feed</th></tr>
<tr><td><i>Pounds</i></td><td><i>Grams per ton</i></td></tr>
<tr><td>101 to market weight.</td><td>10-20</td></tr>
<tr><td>41-100</td><td>20-40</td></tr>
<tr><td>Up to 40</td><td>20-100</td></tr>
</table>
Withdraw 48 hours prior to slaughter.</td><td>Growth promotion and feed efficiency.</td></tr>
<tr><td>b. Hygromycin B</td><td>12</td><td>Chlortetracycline</td><td>50-100</td><td>For swine; as chlortetracycline hydrochloride; withdraw 48 hours prior to slaughter.</td><td>Maintenance of weight gain in presence of atrophic rhinitis reduction of incidence of cervical abscesses; prevention of bacterial swine enteritis.</td></tr>
<tr><td>c. Hygromycin B</td><td>12</td><td>Chlortetracycline</td><td>100-200</td><td>For swine; as chlortetracycline hydrochloride; withdraw 48 hours prior to slaughter.</td><td>Treatment of bacterial swine enteritis.</td></tr>
</table>

(e) To assure safe use, the label and labeling of the additive, any combination of the additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein, except that the label of the complete feed need not bear the quantities of the antibiotic drugs added solely for growth promotion.

NOTE: § 121.213(e)(2) was amended to read "A statement of the quantity or quantities contained therein" by an order published in the FEDERAL REGISTER on March 20, 1965, 30 F.R. 3707, effective January 1, 1966. The effective date of this amendment was stayed by an order published in the FEDERAL REGISTER on September 28, 1965, 30 F.R. 12353, pending resolution of issues at a public hearing.

(3) Adequate directions and warnings for use.

§ 121.214 Diethylcarbamazine.

Diethylcarbamazine may be safely used in animal food when incorporated therein in accordance with the following conditions:

(a) It is used or intended for use as an aid in the control of large roundworms (ascarids) in dogs.

(b) The quantity of the additive permitted to be used or to remain in or on the finished medicated food shall be 66 parts per million, or 30 milligrams per pound.

(c) To assure safe use of the additive, the label and labeling of the additive and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive.

(2) A statement of the quantity of the additive contained therein.

(3) The word "medicated" prominently and conspicuously, on any feed preparation containing the additive, and in juxtaposition with the name of the feed preparation.

(4) Adequate directions and warnings for use, including a prominent statement that such medicated dog food is to be used only when infestation by large roundworms (ascarids) is suspected or known to be present.

§ 121.215 *O,O*-Diethyl *S*-2-(ethylthio) ethyl phosphorodithioate.

Tolerances for residues of *O,O*-diethyl *S*-2-(ethylthio) ethyl phosphorodithioate, calculated as demeton, in ingredients for livestock feed are established as follows:

(a) 5 parts per million in dehydrated sugar beet pulp when present therein as a result of the application of the pesticide to the growing agricultural crop, provided that, if residues of demeton are also present, the total of both residues shall not exceed 5 parts per million.

(b) 5 parts per million in pineapple bran when present therein as a result of the application of the insecticide in the production of pineapples.

§ 121.216 Sodium 2,2-dichloropropionate.

A tolerance of 20 parts per million is established for residues of sodium 2,2-dichloropropionate (calculated as 2,2-dichloropropionic acid) in dehydrated citrus pulp for cattle feed, when present therein as a result of the application of the pesticide during the growing of grapefruit, limes, oranges, and tangerines.

§ 121.217 Tylosin.

The food additive tylosin may be safely used in accordance with the following prescribed conditions:

(a) Tylosin is the antibiotic substance produced by growth of *Streptomyces fradiae* or the same antibiotic substance produced by any other means, and for the purposes of this section refers to tylosin as the specified salt.

(b) The quantities of tylosin or salts of tylosin referred to in this section refer to activities of tylosin base.

(c) Permitted uses of tylosin alone and with certain other additives are described in tabular form in this section, and the tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone or with additional ingredients added for increased effectiveness.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(d) It is used or intended for use as follows:

TABLE 1—TYLOSIN FOR INJECTION

Principal ingredient	Quantity	Combined with—	Quantity	Limitations	Indications for use
1. Tylosin	6.25 mg.-12.5 mg. per sinus.			For turkeys; not for laying turkeys; inject 6.25 mg. or 12.5 mg. per sinus, depending on severity of infection; do not inject within 5 days of slaughter; as tylosin tartrate.	Treatment of infectious sinusitis.
a. Tylosin	6.25 mg.-12.5 mg. per sinus.	Tylosin (in drinking water).	2 gm. per gallon.	For turkeys; administer not more than 5 days in drinking water; do not administer within 5 days of slaughter; as tylosin tartrate.	Maintaining weight gains and feed efficiency in the presence of infectious sinusitis.
2. Tylosin	1 mg.-4 mg. per pound of body weight.			For swine; administer intramuscularly not more than 3 days; do not administer within 4 days of slaughter; as tylosin base.	Treatment of erysipelas, pneumonia, dysentery (vibrionic), arthritis due to pleuropneumonia-like organisms.

TABLE 2—TYLOSIN IN DRINKING WATER

Principal ingredient	Grams per gallon	Combined with—	Quantity	Limitations	Indications for use
1. Tylosin	2-5			For chickens; not for laying chickens; administer not more than 5 days; do not administer within 24 hours of slaughter; as tylosin tartrate.	Prevention or treatment of chronic respiratory disease (airsac infection).
2. Tylosin	2			For turkeys; administer not more than 5 days in drinking water; do not administer within 5 days of slaughter; as tylosin tartrate.	Maintaining weight gains and feed efficiency in the presence of infectious sinusitis.
3. Tylosin	0.25-1			For swine; administer not more than 10 days; withdraw 48 hours prior to slaughter; as tylosin base.	Prevention or treatment of swine dysentery (vibrionic).

TABLE 3—TYLOSIN IN ANIMAL FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Tylosin	10-100			For swine; as tylosin phosphate; continuous use as follows: *Grams per ton* 10-20 — 101 lb. to market weight. 20-40 — 41-100 lb. animal weight. 20-100 — Up to 40 lb. animal weight.	Growth promotion and feed efficiency.
a. Tylosin	10-100	Hygromycin B	12.0	For swine; withdraw 48 hours prior to slaughter.	§ 121.213(c), Table 2, item 1.
2. Tylosin	40-100			For swine; 100 gm. per ton for at least 3 weeks followed by 40 gm. per ton until market weight; as tylosin phosphate.	Prevention of swine dysentery (vibrionic).
3. Tylosin+streptomycin	10-100			For swine; in a combination containing tylosin and streptomycin in a 1 to 1 ratio; as tylosin phosphate plus streptomycin sulfate as follows: *Grams per ton* 40-100 — Up to 40 lb. animal weight. 20-40 — 41-100 lb. animal weight. 10-20 — 101 lb. to market weight.	Growth promotion and feed efficiency.
4. Tylosin	40-100			For swine; administer in feed as tylosin phosphate after treatment with tylosin in drinking water as tylosin base; 0.25 gm. per gallon in drinking water for 3-10 days, 40-100 gm. per ton in feed for 2-6 weeks.	Treatment and control of swine dysentery (vibrionic).

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities of each contained therein.

(3) Adequate directions and warnings for use.

§ 121.218 Diuron.

A tolerance of 4 parts per million is established for residues of diuron (3-(3,4-dichlorophenyl)-1,1-dimethylurea) in dried citrus pulp for livestock feed when present therein as a result of the application of the pesticide in the production of citrus fruits.

§ 121.219 Promazine hydrochloride.

Promazine hydrochloride may be safely used in or on animal feed when incorporated therein in accordance with the following prescribed conditions:

(a) It is used or intended for use as a tranquilizer for cattle (except lactating dairy animals) and horses.

(b) It is used in an amount not less than 0.75 milligram nor more than 1.25 milligrams of the additive per pound of body weight.

(c) To assure safe use of the additive, the label and labeling of the additive and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive.

(2) A statement of the concentration or strength of the additive contained therein.

(3) Adequate directions and warnings for use.

(4) A prominent statement that the preparation is for use in cattle, except lactating dairy animals, and horses.

(5) A statement that the medication is to be withdrawn 72 hours prior to slaughter.

(6) The word "medicated," prominently and conspicuously, on any feed preparation containing the additive, and in juxtaposition with the name of the feed preparation.

§ 121.220 Nystatin.

The food additive nystatin may be safely used in animal feed in accordance with the following prescribed conditions:

(a) Nystatin is the antibiotic substance produced by growth of Streptomyces noursei (Fam. Actinomycetaceae) or the same antibiotic substance produced by any other means, and for the purpose of this section refers to nystatin or feed-grade nystatin.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard, except that 1 gram of nystatin is equivalent to 2,800,000 units of activity.

(c) Permitted uses of nystatin alone and with certain other additives in medicated feeds are described in tabular form in this section. These tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with another ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the principal ingredient. Where principal and secondary ingredients have been mixed, the applicable "limitations" and "indications for use" from both the numbered items and lettered items apply. If duplicated limi-

tations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with one or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient or principal ingredient combination indicated by the cross-reference is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section but may include other ingredients listed as numbered line items. Such term is not intended to imply that the ingredient or combination is of greater value than any other additives named in this section.

(d) It is used or intended for use as follows:

TABLE 1—NYSTATIN IN CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Nystatin	50			For growing chickens	Prevention of crop mycosis and mycotic diarrhea.
a. Nystatin	50	Penicillin	2.4–50	As procaine penicillin G	Growth promotion and feed efficiency.
b. Nystatin	50	Bacitracin	4–50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. Nystatin	50	Chlortetracycline	10–50	As chlortetracycline hydrochloride.	Do.
d. Nystatin	50	Streptomycin	30–50	As streptomycin sulfate	Do.
e. Nystatin	50	Penicillin + bacitracin.	3.6–50	Not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin G + bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. Nystatin	50	Penicillin + streptomycin.	14.4–50	Not less than 2.4 gm. of penicillin nor less than 12 gm. of streptomycin; as procaine penicillin G + streptomycin sulfate.	Do.
2. Nystatin	50			For laying chickens	Prevention of crop mycosis and mycotic diarrhea.
3. Nystatin	50			For growing turkeys	Do.
a. Nystatin	50	Penicillin	2.4–50	As procaine penicillin G	Growth promotion and feed efficiency.
b. Nystatin	50	Bacitracin	4–50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. Nystatin	50	Chlortetracycline.	10–50	As chlortetracycline hydrochloride.	Do.
d. Nystatin	50	Streptomycin	30–50	As streptomycin sulfate	Do.
e. Nystatin	50	Penicillin + bacitracin.	3.6–50	Not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin G + bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. Nystatin	50	Penicillin + streptomycin.	14.4–50	Not less than 2.4 gm. of penicillin nor less than 12 gm. of streptomycin; as procaine penicillin G + streptomycin sulfate.	Do.
4. Nystatin	100			For growing chickens; to be fed for 7 to 10 days.	Treatment of crop mycosis and mycotic diarrhea.
a. Nystatin	100	Penicillin	2.4–50	As procaine penicillin G	Growth promotion and feed efficiency.
b. Nystatin	100	Bacitracin	4–50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. Nystatin	100	Chlortetracycline.	10–50	As chlortetracycline hydrochloride.	Do.
d. Nystatin	100	Streptomycin	30–50	As streptomycin sulfate	Do.
e. Nystatin	100	Penicillin + bacitracin.	3.6–50	Not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin G + bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. Nystatin	100	Penicillin + streptomycin.	14.4–50	Not less than 2.4 gm. of penicillin nor less than 12 gm. of streptomycin; as procaine penicillin G + streptomycin sulfate.	Do.
5. Nystatin	100			For laying chickens; to be fed for 7 to 10 days.	Treatment of crop mycosis and mycotic diarrhea.
6. Nystatin	100			For growing turkeys; to be fed for 7 to 10 days.	Do.
a. Nystatin	100	Penicillin	2.4–50	As procaine penicillin G	Growth promotion and feed efficiency.
b. Nystatin	100	Bacitracin	4–50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. Nystatin	100	Chlortetracycline.	10–50	As chlortetracycline hydrochloride.	Do.
d. Nystatin	100	Streptomycin	30–50	As streptomycin sulfate	Do.
e. Nystatin	100	Penicillin + bacitracin.	3.6–50	Not less than 0.6 gm. of penicillin nor less than 3 gm. of bacitracin; as procaine penicillin G + bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
f. Nystatin	100	Penicillin + streptomycin.	14.4–50	Not less than 2.4 gm. of penicillin nor less than 12 gm. of streptomycin; as procaine penicillin G + streptomycin sulfate.	Do.

TABLE 2—NYSTATIN IN SWINE FEEDS

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Nystatin	20			For swine	Growth promotion and feed efficiency.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein, except that the label of the complete feed need not bear the quantities of antibiotic drugs added solely for growth promotion.

(3) Adequate directions and warnings for use.

§ 121.221 Demeton.

A tolerance of 5 parts per million is established for residues of demeton (a mixture of *0,0*-diethyl *0*(and *S*)-2-(ethylthio)ethyl phosphorothioates) in dehydrated sugar beet pulp for livestock feed when present therein as a result of the application of the pesticide in the production of sugar beets, provided that if residues of *0,0*-diethyl *S*-2-(ethylthio) ethyl phosphorodithioate are also present, the total of both residues shall not exceed 5 parts per million.

§ 121.222 Verxite.

The food additive verxite (exfoliated hydrobiotite) may be safely used in animal feed in accordance with the following prescribed conditions:

(a) The food additive is a thermally expanded magnesium-aluminum-iron silicate containing a minimum of 98 percent of hydrobiotite having a bulk density of from 5 to 7 pounds per cubic foot.

(b) It is used or intended for use:

(1) In poultry feed at a level not to exceed 5 percent of the weight of the finished feed as a nonnutritive bulking agent for restricting calorie intake in pullet replacement feeds.

(2) As an anticaking or blending agent, pelleting aid, or nonnutritive carrier for the incorporation of nutrients in poultry, swine, dog, or ruminant feeds, in an amount not to exceed that necessary to accomplish its intended effect and in no case to exceed 1.5 percent of the dog feed or 5 percent of the final feed for other animals.

(c) To assure safe use of the additive, the label of any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the name of the additive, and when the additive is present in excess of 1 percent, a statement of the quantity of the additive contained therein and the term "nonnutritive" in juxtaposition therewith.

§ 121.223 Sodium nitrite.

Sodium nitrite may be safely used in canned pet food containing meat and fish in accordance with the following prescribed conditions:

(a) It is used or intended for use alone as a preservative and color fixative in canned pet food containing fish, meat, and fish and meat byproducts so that the level of sodium nitrite does not exceed 20 parts per million.

(b) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive shall bear:

(i) The name of the additive.

(ii) A statement of the concentration of the additive in any mixture.

(2) The label or labeling shall bear adequate directions to provide a final product that complies with the limitations prescribed in paragraph (a) of this section.

§ 121.224 Methyl esters of higher fatty acids.

The food additive methyl esters of higher fatty acids may be safely used in animal feeds in accordance with the following prescribed conditions:

(a) The food additive is manufactured by reaction of methyl alcohol with feed-grade fats or oils and consists of not less than 70 percent methyl esters of the following straight-chain monocarboxylic acids: Docosahexanoic acid, eicosapentanoic acid, linoleic acid, myristic acid, oleic acid, palmitic acid, palmitoleic acid, and stearic acid, and lesser amounts of the associated acid esters.

(b) The food additive meets the following specifications:

(1) Free methyl alcohol not to exceed 150 parts per million.

(2) Unsaponifiable matter not to exceed 2 percent.

(3) It is free of chick-edema factor or other factors toxic to chicks, as evidenced during the bioassay method for determining the chick-edema factor as prescribed in subparagraph (4)(ii) of this paragraph.

(4) For the purposes of this section:

(i) Unsaponifiable matter shall be determined by the method described in section 26.049, Official Methods of Analysis of the Association of Official Agricultural Chemists, Ninth Edition (1960).

(ii) The chick-edema factor bioassay method described in the Journal of the Association of Official Agricultural Chemists, Volume 44, page 146 (1961), shall be employed. The presence of chick-edema factor shall be determined by a comparison between the mean log of the pericardial fluid volumes of a test group and of a concurrent negative control group. The significance of the difference in pericardial fluid volumes between the test group and the negative control group is determined by calculating a "*t*" value according to the formula:

$$t=\frac{\bar{x}_t-\bar{x}_c}{\sqrt{\frac{s_t^2}{n_t}+\frac{s_c^2}{n_c}}}$$

where:

$\bar{x}_t$ and $\bar{x}_c$ are the means of the logs of the pericardial fluid volumes of the test and control groups, respectively;

n_t and n_c are the number of chicks in the respective groups;

s_t^2 and s_c^2 are the variances of the test and control groups, respectively.

The variances are calculated as follows:

$$s^2=\frac{n(\Sigma x^2)-(\Sigma x)^2}{n(n-1)}$$

where:

Σx is the sum of the logs of the pericardial fluid volumes;

Σx^2 is the sum of the squares of the logs of the pericardial fluid volumes for either the test *t* or control *c* group data.

The test sample is judged to contain chick-edema factor if the calculated "*t*" exceeds +1.3 and the mean log of the pericardial fluid volume obtained from the negative control group multiplied by 100 is less than 1.1461.

(iii) "Other factors toxic to chicks" referred to in paragraph (b)(3) of this section shall be determined during the course of the bioassay test described in subdivision (ii) of this subparagraph, on the basis of chick deaths or other abnormalities not attributable to chick-edema factor or to the experimental conditions of the test.

(c) It is used or intended for use as a supplementary source of fat for animal feed.

(d) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label and labeling of the additive, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear:

(i) The name of the additive.

(ii) The designation "feed grade" in juxtaposition with the name and equally as prominent.

(2) The label or labeling of the additive and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear adequate directions for use.

§ 121.225 Antibiotics for growth promotion and feed efficiency.

The antibiotics listed in this section may be safely used in animal feeds as an aid in stimulating growth and improving feed efficiency, in accordance with the following prescribed conditions:

(a) *Procaine penicillin.* Procaine penicillin as follows:

(1) Procaine penicillin is the procaine salt of the antibiotic substance produced by the growth of Penicillium notatum or Penicillium chrysogenum or the same antibiotic substance produced by any other means.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standards.

(3) It is used or intended for use:

(i) In the feed of chickens, turkeys, and pheasants in an amount not less than 2.4 grams nor more than 50 grams per ton of finished feed.

(ii) In the feed of quail not over 5 weeks of age, in an amount not less than 5 grams nor more than 20 grams per ton of finished feed.

(iii) With bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin in the feed of chickens and turkeys, in an amount not less than 0.6 gram of penicillin and not less than 3 grams of the bacitracin nor more than 50 grams of the combination per ton of finished feed.

(iv) With streptomycin, in the feed of chickens and turkeys in an amount not less than 2.4 grams of penicillin and not less than 12 grams of streptomycin nor more than 50 grams of the combination.

(v) With tylosin phosphate in the feed of chickens, in an amount not less than 3.2 grams nor more than 50 grams of the combination per ton of complete feed. It is combined in a ratio of 1.2 parts of penicillin to 2 parts of tylosin.

(vi) With bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin in the feed of swine, in an amount not less than 2.5 grams of penicillin and not less than 7.5 grams of bacitracin nor more than 50 grams of the combination per ton of finished feed.

(vii) With streptomycin in the feed of swine, in an amount not less than 1.5 grams of penicillin and not less than 7.5 grams of streptomycin nor more than 50 grams of the combination per ton of finished feed.

(viii) In the feed of swine in an amount not less than 10 grams of penicillin nor more than 50 grams of penicillin per ton of finished feed.

(b) *Bacitracin.* Bacitracin as follows:

(1) Bacitracin is the antibiotic substance produced by the growth of Bacillus subtilis var. Tracy or the same antibiotic substance produced by any other means, and for the purposes of this paragraph refers to bacitracin or feed grade bacitracin.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standards.

(3) It is used or intended for use:

(i) In the feed of chickens, turkeys, and pheasants in an amount not less than 4 grams nor more than 50 grams per ton of finished feed.

(ii) In the feed of quail not over 5 weeks of age, in an amount not less than 5 grams nor more than 20 grams per ton of finished feed.

(iii) With procaine penicillin as provided in paragraph (a)(3)(iii) of this section.

(iv) In the feed of swine, in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(v) With procaine penicillin as provided in paragraph (a)(3)(vi) of this section.

(c) *Zinc bacitracin.* Zinc bacitracin as follows:

(1) Zinc bacitracin is the zinc salt of the antibiotic substance produced by growth of Bacillus subtilis var. Tracy or the same antibiotic substance produced by any other means, and for the purposes of this paragraph refers to zinc bacitracin or feed grade zinc bacitracin.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standards.

(3) It is used or intended for use:

(i) In the feed of chickens, turkeys, and pheasants in an amount not less than 4 grams nor more than 50 grams per ton of finished feed.

(ii) With procaine penicillin as provided in paragraph (a)(3)(iii) of this section.

(iii) In feed for growing cattle, in an amount providing not less than 35 milligrams nor more than 70 milligrams per animal per day.

(iv) In the feed of quail not over 5 weeks of age, in an amount not less than 5 grams nor more than 20 grams per ton of finished feed.

(v) In the feed of swine, in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(vi) With procaine penicillin as provided in paragraph (a)(3)(vi) of this section.

(d) *Bacitracin methylene disalicylate.* Bacitracin methylene disalicylate as follows:

(1) Bacitracin methylene disalicylate is the methylene disalicylate salt of the antibiotic substance produced by growth of *Bacillus substilis var.* Tracy or the same antibiotic substance produced by any other means, and for the purpose of this paragraph refers to bacitracin methylene disalicylate or feed grade bacitracin methylene disalicylate.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standards.

(3) It is used or intended for use:

(i) In the feed of chickens, turkeys, and pheasants in an amount not less than 4 grams nor more than 50 grams per ton of finished feed.

(ii) With procaine penicillin as provided in paragraph (a)(3)(iii) of this section.

(iii) In the feed of quail not over 5 weeks of age, in an amount not less than 5 grams nor more than 20 grams per ton of finished feed.

(iv) In the feed of swine, in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(v) With procaine penicillin as provided in paragraph (a)(3)(vi) of this section.

(e) *Streptomycin.* Streptomycin as follows:

(1) Streptomycin is the antibiotic substance produced by the growth of *Streptomyces griseus* or the same antibiotic substance produced by any other means, and for the purposes of this paragraph refers to streptomycin or feed grade streptomycin.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standards.

(3) It is used or intended for use:

(i) In the feed of chickens and turkeys in an amount not less than 30 grams nor more than 50 grams per ton of finished feed.

(ii) With procaine penicillin as provided in paragraph (a)(3)(iv) of this section.

(iii) With procaine penicillin as provided in paragraph (a)(3)(vii) of this section.

(f) *Chlortetracycline.* Chlortetracycline as follows:

(1) Chlortetracycline is the antibiotic substance produced by growth of *Streptomyces aureofaciens* or the same antibiotic substance produced by any other means, and for the purposes of this paragraph refers to chlortetracycline or feed grade chlortetracycline.

(2) The quantities of the antibiotic referred to in this paragraph refer to activity equivalent to that of the appropriate antibiotic master standard.

(3) It is used or intended for use:

(i) In the feed of chickens and turkeys, in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(ii) In the feed of mink, in an amount not less than 20 grams nor more than 50 grams per ton of finished feed, and also as an aid in increasing pelt size.

(iii) In the feed of horses up to 1 year of age in the amount of 85 milligrams per head per day, where such horses are not to be slaughtered for food purposes.

(iv) In the feed of swine, in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(v) In the feed of lambs and growing sheep, in an amount not less than 20 grams nor more than 50 grams per ton of finished feed.

(vi) In the feed of calves, in an amount not less than 25 milligrams per head per day nor more than 70 milligrams per head per day in finished feed.

(vii) In the feed of growing cattle, in an amount equal to 70 milligrams per head per day in finished feed.

(g) *Manganese bacitracin.* Manganese bacitracin as follows:

(1) Manganese bacitracin is the manganese salt of the antibiotic substance produced by the growth of *Bacillus subtilis* var. Tracy or the same antibiotic substance produced by any other means, and for the purposes of this paragraph refers to manganese bacitracin or feed grade manganese bacitracin.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standards.

(3) It is used or intended for use:

(i) In the feed of chickens or turkeys in an amount not less than 4 grams nor more than 50 grams per ton of finished feed.

(ii) In the feed of swine in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(iii) With procaine penicillin, as provided in paragraph (a)(3)(iii) of this section.

(iv) In the feed of quail not over 5 weeks of age, in an amount not less than 5 grams nor more than 20 grams per ton of finished feed.

(v) With procaine penicillin as provided in paragraph (a)(3)(vi) of this section.

(vi) In the feed of swine, in an amount not less than 10 grams nor more than 50 grams per ton of finished feed.

(h) *Tylosin.* Tylosin, as follows:

(1) Tylosin is the antibiotic substance produced by the growth of Streptomyces fradiae, or the same antibiotic substance produced by any other means, and for the purpose of this paragraph refers to tylosin or feed grade tylosin.

(2) The quantities of the antibiotic referred to in this paragraph refer to the activities equivalent to those of the appropriate standard.

(3) It is used or intended for use in the feed of chickens, as the phosphate salt, in an amount not less than 4 grams nor more than 50 grams per ton of finished feed.

(i) *Oleandomycin.* Oleandomycin as follows:

(1) Oleandomycin is the antibiotic substance produced by the growth of *Streptomyces antibioticus* or the same antibiotic substance produced by any other means, and for the purposes of this paragraph refers to oleandomycin or feedgrade oleandomycin.

(2) The quantities of the antibiotics referred to in this paragraph refer to activities equivalent to those of the appropriate antibiotic master standard and may be adsorbed upon a suitable carrier vehicle that is not a food additive or which is provided for by regulation in this chapter.

(3) It is used or intended for use:

(i) In the feed of chickens and turkeys, in an amount not less than 1 gram nor more than 2 grams per ton of finished feed.

(ii) With the monoalkyl (C_8-C_{18}) trimethylammonium salt of oxytetracycline in the feed of swine, containing 2 grams of oleandomycin and 8 grams of oxytetracycline activity, calculated as the hydrochloride, per ton of finished feed.

(j) *Erythromycin.* Erythromycin, as follows:

(1) Erythromycin is the antibiotic substance produced by the growth of *Streptomyces erythreus*, or the same antibiotic substance produced by any other means.

(2) The quantities of the antibiotic in this paragraph refer to the activities equivalent to those of the appropriate standard.

(3) It is used or intended for use in the feed of chickens, as the thiocyanate salt, in an amount not less than 4.6 grams nor more than 18.5 grams per ton of finished feed.

(k) through (v) [Reserved]

(w) *Labeling requirements.* (1) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, or feed additive premix prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive or additives.

(ii) A statement of the quantity of each contained in any mixtures.

(iii) A statement of the conditions for which the feed is to be used.

(iv) Adequate mixing directions to provide a complete feed with the proper concentration of the additive or additives, whether or not intermediate feed additive supplements, feed additive concentrates, or feed additive premixes are also used.

NOTE: §121.225(w) was amended as follows by an order published in the FEDERAL REGISTER on March 20, 1965, 30 F.R. 3708, effective January 1, 1966:

(w) *Labeling requirements.* To assure safe use:

(1) The label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, or feed additive premix prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive or additives.

(ii) A statement of the quantity of each contained therein.

(iii) A statement of the conditions for which the feed is to be used.

(iv) Adequate mixing directions to provide a complete feed with the intended concentration of the additives, whether or not premixes are also used.

(v) Adequate use directions to provide a complete feed labeled as provided in subparagraph (2) of this paragraph.

(2) The label and labeling of the complete feed shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive or additives.

(ii) A statement of the quantity contained therein.

(iii) Adequate directions for use.

The effective date of this amendment was stayed by an order published in the FEDERAL REGISTER on September 28, 1965, 30 F.R. 12353, pending resolution of issues at a public hearing.

§ 121.226 DDT.

The following tolerance is established for residues of DDT resulting from use of DDT as a pesticide on the growing agricultural crop: 100 parts per million in or on dried tomato pomace to be used in dog and cat food at levels up to 5 percent by weight of the prepared food. If residues of other chlorinated pesticides are present, the total of all such chlorinated compounds shall not exceed the levels established in this section.

§ 121.227 TDE (DDD).

The following tolerances are established for residues of TDE (DDD) resulting from use of TDE (DDD) as a pesticide on the growing agricultural crop: 100 parts per million in or on dried tomato pomace to be used in dog and cat food at levels up to 5 percent by weight of the prepared food. If residues of other chlorinated pesticides are present, the total of all chlorinated compounds shall not exceed the levels established in this section.

§ 121.228 Malathion.

Malathion (*O,O*-dimethyl dithiophosphate of diethyl mercaptosuccinate) may be safely used in feed in accordance with the following conditions.

(a) A tolerance of 50 parts per million is established for residues of malathion in dehydrated citrus pulp for cattle feed, when present as the result of the application of the pesticide to bagged citrus pulp during storage. Whether or not tolerances for residues of malathion on the fresh fruit have been established under section 408 of the act, the total residue of malathion in the dried citrus pulp shall not exceed 50 parts per million.

(b) A tolerance of 10 parts per million is established for malathion in nonmedicated cattle feed concentrate blocks resulting from its application as a pesticide to paper used in packaging the nonmedicated cattle feed concentrate blocks.

§ 121.229 Silicon dioxide.

The food additive silicon dioxide may be safely used in specified feed and feed components in accordance with the following conditions:

(a) The food additive is manufactured by vapor phase hydrolysis or by other means whereby the particle size is such as to accomplish the intended effect.

(b) It is used or intended for use in feed and feed components as an anticaking agent, and/or grinding aid, as follows:

Feed component:	*Limitations (percent)*
BHT (butylated hydroxytoluene)	2
Methionine hydroxy analog and its calcium salts	1
Piperazine, piperazine salts	0.8
Sodium propionate	1
Urea	1
Vitamins	3

§ 121.230 Ethyl cellulose.

The food additive ethyl cellulose may be safely used in animal feed in accordance with the following prescribed conditions:

(a) The food additive is a cellulose ether containing ethoxy (OC_2H_5) groups attached by an ether linkage and containing on an anhydrous basis not more than 2.6 ethoxy groups per anhydroglucose unit.

(b) It is used or intended for use as a binder or filler in dry vitamin preparations to be incorporated into animal feed.

§ 121.231 Choline xanthate.

Choline xanthate may be safely used as a component of animal feed as an added source of choline to supplement the diets of poultry, ruminants, and swine in accordance with good feeding practice.

§ 121.232 Bacitracin.

The food additive bacitracin may be safely used in animal feed in accordance with the following prescribed conditions:

(a) Bacitracin is the antibiotic substance produced by growth of Bacillus subtilis var. Tracy or the same antibiotic substance produced by any other means, and for the purposes of this section refers to bacitracin or feed grade bacitracin.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of bacitracin alone and with certain other additives in medicated feeds are described in tabular form in this section. These tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with another ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the principal ingredient. Where principal and secondary ingredi-

ents have been mixed, the applicable "limitations" and "indications for use" from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with one or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient or principal ingredient combination indicated by the cross-reference is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section but may include other ingredients listed as numbered line items. Such term is not intended to imply that the ingredient or combination is of greater value than any other additives named in this section.

(d) The additive is used or intended for use as follows:

TABLE 1—BACITRACIN IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Bacitracin	10–50			For chickens; 50 gm. per ton first 4–6 weeks of egg production; 10–50 gm. per ton for remainder of egg-laying period; as bacitracin.	Maintaining or increasing egg production.
1.2 Bacitracin + penicillin.	10–50			For chickens; 12.5 gm. of penicillin plus 37.5 gm. of bacitracin first 4 to 6 weeks of egg production; not less than 2.5 gm. nor more than 12.5 gm. of penicillin plus not less than 7.5 gm. nor more than 37.5 gm. of bacitracin for remainder of laying period; as procaine penicillin plus bacitracin.	Do.
a. 1.1 or 1.2	10–50	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
b. 1.1	10–50	Reserpine	1.82	For laying chickens; as prescribed in § 121.205 (c), table 1, item 2.	§ 121.205(d), table 1, item 2.
2.1 Bacitracin	50–100			For chickens; as bacitracin.	Prevention of chronic respiratory disease (air-sac infection); blue comb (nonspecific infectious enteritis).
2.2 Bacitracin + penicillin.	50–100			For chickens; 50–100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin plus bacitracin.	Do.
a. 2.1	50–100	Amprolium	36.3–227	For replacement chickens; as prescribed in § 121.210(c), table 1, item 3.1; for broiler chickens as prescribed in § 121.210(c), table 1, item 2.1; not for laying chickens.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 2.1	50–100	Amprolium + ethopabate.	113.5–227 3.6	For broiler chickens; not for laying chickens; as prescribed in § 121.210 (c), table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
2.2 Bacitracin + penicillin—Continued					
c. 2.1 or 2.2	50–100	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
d. 2.1	50–100	Zoalene	36.3–113.5	For chickens; not for laying chickens; as prescribed in § 121.207 (c), table, items 2.1 and 3.1.	§ 121.207(c), table, items 2.1 and 3.1.
e. 2.1	50–100	Reserpine	0.908 or 1.82	For chickens; as prescribed in § 121.205(c), table 1, item 1 or 2.	§ 121.205(c), table 1, item 1 or 2.
f. 2.1	50–100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	For chickens: as prescribed in § 121.262 (c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
3.1 Bacitracin	50–100			For turkeys; as bacitracin.	Prevention of infectious sinusitis, blue comb (mud fever).
3.2 Bacitracin + penicillin.	50–100			For turkeys; 50–100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin plus bacitracin.	Do.
a. 3.1	50–100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	For turkeys; as prescribed in § 121.262 (c), table 1, item 2.1.	§ 121.262(c), table 1, item 2.1.
4.1 Bacitracin	100			For chickens; as bacitracin.	Maintaining or increasing hatchability of eggs.
4.2 Bacitracin + penicillin.	100			For chickens; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as procaine penicillin plus bacitracin.	Do.
a. 4.1 or 4.2	100	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
b. 4.1	100	Reserpine	1.82	For laying chickens; as prescribed in § 121.205 (c), table 1, item 2.	§ 121.205(c), table 1, item 2.
5.1 Bacitracin	100			For chickens; as bacitracin.	During times of stress, prevention of diseases named in this section caused by organisms susceptible to bacitracin.
5.2 Bacitracin + penicillin.	100			For chickens; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as procaine penicillin plus bacitracin.	During times of stress, prevention of diseases named in this section caused by organisms susceptible to penicillin plus bacitracin.
a. 5.1	100	Reserpine	0.908 or 1.82	For chickens; as prescribed in § 121.205(c), table 1, item 1 or 2.	§ 121.205(c), table 1, item 1 or 2.
b. 5.1	100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	For chickens; as prescribed in § 121.262 (c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
6.1 Bacitracin	100–500			For chickens; as bacitracin.	Treatment of chronic respiratory disease (air-sac infection); blue comb (nonspecific infectious enteritis).

TABLE 1—BACITRACIN IN COMPLETE CHICKEN AND TURKEY FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
6.2 Bacitracin + penicillin.	100-500			For chickens; 100-500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin except that it contains not more than 125 gm. of penicillin; as procaine penicillin+bacitracin.	Treatment of chronic respiratory disease (air-sac infection); blue comb (nonspecific infectious enteritis).
a. 6.1	100-200	Amprolium	36.3-227	For replacement chickens; as prescribed in § 121.210(c), table 1, item 3.1; for broiler chickens as prescribed in § 121.210(c), table 1, item 2.1; not for laying chickens.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 6.1	100-200	Amprolium + ethopabate.	113.5-227 3.6	For broiler chickens; not for laying chickens; as prescribed in § 121.210(c), table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
c. 6.1	100	Hygromycin B	8-12	For chickens.	§ 121.213(d), table 1, item 1.
d. 6.2	100	Hygromycin B	8-12	For chickens; 100 gm. of combination; not less than 25 gm. of penicillin nor less than 50 gm. of bacitracin.	Do.
e. 6.1	100-200	Zoalene	36.3-113.5	For chickens; not for laying chickens; as prescribed in § 121.207(c), table, items 2.1 and 3.1.	§ 121.207(c), table, items 2.1 and 3.1.
f. 6.1	100-200	Reserpine	0.908 or 1.82	For chickens; as prescribed in § 121.205(c), table 1, item 1 or 2.	§ 121.205(c), table 1, item 1 or 2.
7.1 Bacitracin	100-500			For chicks; in starter ration; as bacitracin.	Prevention of early mortality of chicks due to organisms susceptible to bacitracin.
7.2 Bacitracin + penicillin.	100-500			For chicks; in starter ration; 100-500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin except that it contains not more than 125 gm. of penicillin; as procaine penicillin + bacitracin.	Prevention of early mortality of chicks due to organisms susceptible to bacitracin and penicillin.
a. 7.1	100	Hygromycin B	8-12	For chicks; in starter ration.	§ 121.213(d), table 1, item 1.
b. 7.2	100	Hygromycin B	8-12	For chicks; in starter ration; 100 gm. of combination, 75 gm. of bacitracin plus 25 gm. of penicillin.	Do.
8.1 Bacitracin	100-500			For turkeys; as bacitracin.	Treatment of infectious sinusitis, blue comb (mud fever).
8.2 Bacitracin + penicillin.	100-500			For turkeys; 100-500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin except that it contains not more than 125 gm. of penicillin; as procaine penicillin+bacitracin.	Do.

TABLE 2—BACITRACIN IN COMPLETE SWINE FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Bacitracin	50-100			For swine; as bacitracin	Aid in the prevention of bacterial swine enteritis.
1.2 Bacitracin + penicillin.	50-100			For swine; 50-100 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin; as bacitracin + procaine penicillin.	Do.
2.1 Bacitracin	100			For swine; as bacitracin	Treatment of bacterial swine enteritis.
2.2 Bacitracin + penicillin.	100			For swine; 100 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin; as bacitracin + procaine penicillin.	Do.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.233 Zinc bacitracin.

The food additive zinc bacitracin may be safely used in animal feed in accordance with the following prescribed conditions:

(a) Zinc bacitracin is the zinc salt of the antibiotic substance produced by growth of Bacillus subtilis var. Tracy or the same antibiotic substance produced by any other means, and for the purposes of this section refers to zinc bacitracin or feed grade zinc bacitracin.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of zinc bacitracin alone and with certain other additives in medicated feeds are described in tabular form in this section. These tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with another ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the principal ingredient. Where principal and secondary ingredients have been mixed, the applicable "limitations" and "indications for use" from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with one or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient or principal ingredient combination indicated by the cross-reference is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section but may include other ingredients listed as numbered line items. Such term is not intended to imply that the ingredient or combination is of greater value than any other additives named in this section.

(d) The additive is used or intended for use as follows:

TABLE 1—ZINC BACITRACIN IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Bacitracin	10-50			For chickens; 50 gm. per ton first 4 to 6 weeks of egg production; 10-50 gm. per ton for remainder of egg-laying period; as zinc bacitracin.	Maintaining or increasing egg production.
1.2 Bacitracin + penicillin.	10-50			For chickens; 12.5 gm. of penicillin plus 37.5 gm. of bacitracin first 4 to 6 weeks of egg production; not less than 2.5 gm. nor more than 12.5 gm. of penicillin plus not less than 7.5 gm. nor more than 37.5 gm. of bacitracin for remainder of laying period; as procaine penicillin plus zinc bacitracin.	Do.
a. 1.1 or 1.2	10-50	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
b. 1.1	10-50	Reserpine	1.82	For laying chickens; as prescribed in § 121.205 (c), table 1, item 2.	§ 121.205(c), table 1, item 2.
2.1 Bacitracin	50-100			For chickens; as zinc bacitracin.	Prevention of chronic respiratory disease (air-sac infection); blue comb (non-specific infectious enteritis).
2.2 Bacitracin + penicillin.	50-100			For chickens; 50-100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin plus zinc bacitracin.	Do.
a. 2.1	50-100	Amprolium	36.3-227	For replacement chickens; as prescribed in § 121.210(c), table 1, item 3.1; for broiler chickens as prescribed in § 121.210(c), table 1, item 2.1; not for laying chickens.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 2.1	50-100	Amprolium + ethopabate.	113.5-227 3.6	For broiler chickens; not for laying chickens; as prescribed in § 121.210 (c), table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
c. 2.1 or 2.2	50-100	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
d. 2.1	50-100	Zoalene	36.3-113.5	For chickens; not for laying chickens; as prescribed in § 121.207 (c), table, items 2.1 and 3.1.	§ 121.207(c), table, items 2.1 and 3.1.
e. 2.1	50-100	Reserpine	0.908 or 1.82	For chickens; as prescribed in § 121.205(c), table 1, item 1 or 2.	§ 121.205(c), table 1, item 1 or 2.
f. 2.1	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For chickens; as prescribed in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
3.1 Bacitracin	50-100			For turkeys; as zinc bacitracin.	Prevention of infectious sinusitis, blue comb (mud fever).
3.2 Bacitracin + penicillin.	50-100			For turkeys; 50-100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin plus zinc bacitracin.	Do.
a. 3.1	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For turkeys; as prescribed in § 121.262(c), table 1, item 2.1.	§ 121.262(c), table 1, item 2.1.
4.1 Bacitracin	100			For chickens; as zinc bacitracin.	Maintaining or increasing hatchability of eggs.
4.2 Bacitracin + penicillin.	100			For chickens; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as procaine penicillin plus zinc bacitracin.	Do.
a. 4.1 or 4.2	100	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
b. 4.1	100	Reserpine	1.82	For laying chickens; as prescribed in § 121.205 (c), table 1, item 2.	§ 121.205(c), table 1, item 2.
5.1 Bacitracin	100			For chickens; as zinc bacitracin.	During times of stress, prevention of diseases named in this section caused by organisms susceptible to bacitracin.
5.2 Bacitracin + penicillin.	100			For chickens; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as procaine penicillin plus zinc bacitracin.	During times of stress, prevention of diseases named in this section caused by organisms susceptible to penicillin plus bacitracin.
a. 5.1	100	Reserpine	0.908 or 1.82	For chickens; as prescribed in § 121.205(c), table 1, item 1 or 2.	§ 121.205(c), table 1, item 1 or 2.
b. 5.1	100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For chickens as prescribed in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
6.1 Bacitracin	100-500			For chickens; as zinc bacitracin.	Treatment of chronic respiratory disease (air-sac infection); blue comb (nonspecific infectious enteritis).
6.2 Bacitracin + penicillin.	100-500			For chickens; 100-500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin except that it contains not more than 125 gm. of penicillin; as procaine penicillin + zinc bacitracin.	Do.
a. 6.1	100-200	Amprolium	36.3-227	For replacement chickens; as prescribed in § 121.210(c), table 1, item 3.1; for broiler chickens as prescribed in § 121.210(c), table 1, item 2.1; not for laying chickens.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 6.1	100-200	Amprolium + ethopabate.	113.5-227 3.6	For broiler chickens; not for laying chickens; as prescribed in § 121.210 (c), table 1, item 2.2	§ 121.210(c), table 1, item 2.2.
c. 6.1	100	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
d. 6.2	100	do	8-12	For chickens; 100 gm. of combination; not less than 25 gm. of penicillin nor less than 50 gm. of bacitracin.	Do.
e. 6.1	100-200	Zoalene	36.3-113.5	For chickens; not for laying chickens; as prescribed in § 121.207 (c), table, items 2.1 and 3.1.	§ 121.207(c), table, items 2.1 and 3.1.

TABLE 1—ZINC BACITRACIN IN COMPLETE CHICKEN AND TURKEY FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
6.2 Bacitracin + penicillin—Continued					
f. 6.1	100-200	Reserpine	0.908 or 1.82	For chickens; as prescribed in § 121.205(c), table 1, item 1 or 2.	§ 121.205(c), table 1, item 1 or 2.
7.1 Bacitracin	100-500			For chicks; in starter ration; as zinc bacitracin.	Prevention of early mortality of chicks due to organisms susceptible to zinc bacitracin.
7.2 Bacitracin + penicillin.	100-500			For chicks; in starter ration; 100-500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin except that it contains not more than 125 gm. of penicillin; as procaine penicillin + zinc bacitracin.	Prevention of early mortality of chicks due to organisms susceptible to zinc bacitracin and penicillin.
a. 7.1	100	Hygromycin B	8-12	For chicks; in starter ration.	§ 121.213(d), table 1, item 1.
b. 7.2	100	do	8-12	For chicks; in starter ration; 100 gm. of combination; 75 gm. of zinc bacitracin plus 25 gm. of penicillin.	Do.
8.1 Bacitracin	100-500			For turkeys; as zinc bacitracin.	Treatment of infectious sinusitis, blue comb (mud fever).
8.2 Bacitracin + penicillin.	100-500			For turkeys; 100-500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin except that it contains not more than 125 gm. of penicillin; as procaine penicillin + zinc bacitracin.	Do.

TABLE 2—ZINC BACITRACIN IN COMPLETE SWINE FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Bacitracin	50-100			For swine; as zinc bacitracin.	Aid in the prevention of bacterial swine enteritis.
1.2 Bacitracin + penicillin.	50-100			For swine; 50-100 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin; as zinc bacitracin + procaine penicillin.	Do.
2.1 Bacitracin	100			For swine; as zinc bacitracin.	Treatment of bacterial swine enteritis.
2.2 Bacitracin + penicillin.	100			For swine; 100 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin; as zinc bacitracin + procaine penicillin.	Do.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.234 Lignin sulfonates.

Lignin sulfonate may be safely used in animal feed in accordance with the following prescribed conditions:

(a) The food additive is either one, or a combination, of the ammonium, calcium, magnesium, or sodium salts of the extract of spent sulfite liquor derived from the sulfite digestion of wood.

(b) It is used in animal feed as the sole pelleting aid, in an amount not to exceed 4 percent of the finished pellets.

§ 121.235 Polysorbate 80.

The food additive polysorbate 80 may be safely used as an emulsifier in milk-replacer formulations for calves.

§ 121.236 Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

The food additive polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) may be safely used in animal feeds in accordance with the following prescribed conditions:

(a) It is used alone or in combination with sorbitan monostearate as an emulsifier in mineral premixes and dietary supplements for animal feeds.

(b) It is used as an emulsifier in milk-replacer formulations for calves.

§ 121.237 Nihydrazone.

Nihydrazone may be safely used in animal feed when incorporated therein in accordance with the following prescribed conditions:

(a) The additive is the chemical 5-nitro-2-furaldehyde acetylhydrazone.

(b) The antibiotic activities authorized are expressed in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of nihydrazone alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredients. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredients and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredients may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(d) It is used or intended for use as follows:

NIHYDRAZONE IN COMPLETE CHICKEN FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Nihydrazone	100			For broilers; for replacement chickens not over 14 weeks of age; not for laying chickens.	Prevention of chronic respiratory disease (air-sac infection). In the presence of chronic respiratory disease (air-sac infection) to reduce mortality and severity of infection and assist in maintaining weight gains and feed efficiency. Prevention of pullorum disease; fowl typhoid; paratyphoid (salmonellosis); coccidiosis caused by *E. tenella*, *E. necatrix*, *E. maxima*, and *E. brunetti* and histomoniasis (blackhead).
a. Nihydrazone.	100	Penicillin	2.4-50	As procaine penicillin	Growth promotion and feed efficiency.
b. Nihydrazone.	100	Penicillin+bacitracin.	3.6-50	Not less than 0.6 gm. of penicillin and not less than 3 gm. of bacitracin; as procaine penicillin+bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
c. Nihydrazone.	100	Bacitracin	4-50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
d. Nihydrazone.	100	Chlortetracycline.	10-50	As chlortetracycline hydrochloride.	Do.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities of additive(s) contained therein.

(3) Adequate directions and warnings for use, including a statement to the effect that poultry that have survived salmonella outbreaks should not be kept for laying-house replacement or breeders unless tests show that they are not carriers.

§ 121.238 Bithionol.

Bithionol may be safely used in chicken feed in accordance with the following prescribed conditions:

(a) When used in this section:

(1) Bithionol is the chemical substance 2,2'-thiobis(4,6-dichlorophenol).

(2) The quantities of the additive prescribed refer to the weight of the bithionol as $C_{12}H_6Cl_4O_2S$.

(b) The permitted use of bithionol with methiotriazamine is described in tabular form in this section. The term "principal ingredient" used in this table refers to the additive named in the title of this section and is not intended to imply that the ingredient is of greater value than other additives named in this section.

(c) It is used or intended for use as follows:

BITHIONOL IN CHICKEN FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
Bithionol	454 (0.05%)	Methiotriazamine	90.8 (0.01%)	For chickens; not to be fed to laying chickens; do not feed within 5 days of slaughter.	Prevention of coccidiosis; as an adjunct in reducing the tapeworm and large roundworm burden.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities of the additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.239 Methiotriazamine.

The food additive methiotriazamine may be safely used in chicken feed in accordance with the following prescribed conditions:

(a) When used in this section:

(1) Methiotriazamine is the chemical 4,6-diamino-1-(4-methyl-mercaptophenyl)-1,2-dihydro-2,2-dimethyl-1,3,5-triazine hydrochloride.

(2) The quantities of the additive prescribed refer to the weight of the additive as the chemical $C_{12}H_{18}N_5S \cdot HCl$.

(b) The permitted use of methiotriazamine with bithionol in chicken feed is described in the following table. The term "principal ingredient" as used in this table refers to the additive named in the title of this section and is not intended to imply that the ingredient is of greater value than other additives named in this section.

(c) It is used or intended for use as follows:

METHIOTRIAZAMINE IN CHICKEN FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
Methiotriazamine	90.8 (0.01%)	Bithionol	454 (0.05%)	For chickens; not to be fed to laying chickens; do not feed within 5 days of slaughter.	Prevention of coccidiosis; as an adjunct in reducing the tapeworm and large roundworm burden.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.240 *O,O*-Dimethyl *S*-4-oxo-1,2,3-benzotriazin-3(4H)-ylmethyl phosphorodithioate.

A tolerance of 5 parts per million is established for residues of the insecticide

O,O-dimethyl *S*-4-oxo-1,2,3-benzotriazin-3(4H)-ylmethyl phosphorodithioate in dried citrus pulp for the feed of cattle, goats, and sheep. Such residue may be present therein only as a result of the application of the insecticide to the growing agricultural crop.

§ 121.241 Diethylstilbestrol.

Diethylstilbestrol (3, 4-bis (*p*-hydroxyphenyl)-3-hexene) may be safely used in feed for animals raised for food production when incorporated therein in accordance with the following conditions:

(a) Permitted uses of diethylstilbestrol alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the additive alone, or with an additional ingredient added for increased effectiveness.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided for by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additive named in this section.

(b) It is used or intended for use in feed as follows:

DIETHYLSTILBESTROL IN FEED

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
	Mg. per head per day				
1. Diethylstilbestrol.	10			For beef cattle; feed 10 mg. per head in not less than 1 pound of feed; withdraw 48 hours before slaughter; do not feed to breeding or dairy animals.	Fattening of beef cattle.
a. 1	10	Chlortetracycline.	70-750 mg. per head per day; 0.5 mg. per pound of body weight for animals over 1,500 pounds.	§ 121.208(d), table 6, items 1-8.	§ 121.208(d), table 6, items 1-8.
b. 1	10	Oxytetracycline.	75-80 mg. per head per day.	§ 121.251(d), table 2, item 1.	§ 121.251(d), table 2, item 1.
c. 1	10	Bacitracin	35-70 mg. per head	As zinc bacitracin	Growth promotion and feed efficiency.
2. Diethylstilbestrol.	2			For sheep; withdraw 48 hours before slaughter; do not feed to breeding animals.	Fattening of sheep.

(c) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall contain, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the concentration or strength of the additive or additives contained therein.

(3) Adequate directions to provide a daily diethylstilbestrol intake of:

(i) 10 milligrams for each beef animal.

(ii) 2 milligrams for each sheep.

(4) A statement that the feed must be discontinued at least 48 hours before slaughter.

(5) A statement that feeds containing diethylstilbestrol are not to be fed to breeding or dairy animals.

(d) No residue of the additive shall be present in any edible portion of such animal after slaughter or in any food yielded by or derived from the living animal as determined by methods of examination prescribed in this section.

(e) The method of examination prescribed for the quantitative determination of estrogenic activity is the method of E. J. Umberger, G. H. Gass, and J. M. Curtis published in Endocrinology, volume 63, page 806 (1958).

(f) The method of examination prescribed for the qualitative identification of estrogenic activity as diethylstilbestrol is as follows:

(1) (i) Extract the diethylstilbestrol with alkali from a suitably prepared sample of fat dissolved in isooctane; or

(ii) Extract the diethylstilbestrol with ethyl alcohol from lean meat or liver, followed by hydrolysis of the alcohol extractive with dilute hydrochloric acid.

(2) Either of the solutions of diethylstilbestrol described in subparagraph (1) of this paragraph is next extracted with chloroform, and the chloroform extract is washed with 10 percent sodium carbonate to remove strongly acidic substances.

(3) The chloroform extractive of diethylstilbestrol is then extracted with 1 percent sodium hydroxide, and the resulting solution is acidified.

(4) The hormone is reextracted from the acidified solution with chloroform. If the solution is colored, the extraction procedures may be repeated.

(5) The chloroform is evaporated and the remaining residue is dissolved in a suitable volume of methyl alcohol for identification of the diethylstilbestrol, as follows:

(i) Impregnate Whatman No. 1 filter paper with a solution of 40 percent formamide in methyl alcohol, blot it lightly, and dry for 5 minutes.

(ii) Spot an aliquot of the methyl alcohol solution on the paper.

(iii) Similarly, spot an aliquot of a methyl alcohol solution of Reference Standard diethylstilbestrol for identification comparison.

(iv) Place the paper in a chromatographic tank and develop, using the continuous ascending technique, either with the solvent system heptane:toluene:: 1:4 for 2.5 hours, or the solvent system cyclohexene:cyclohexanol:: 98:2 for 45 minutes.

(v) Remove the paper from the tank and, while still wet, irradiate it with ultraviolet light from a 15-watt germicidal lamp for 1 minute.

(vi) Observe fluorescence through a black-light viewing apparatus.

§ 121.242 Nickel sulfate.

A tolerance of 175 parts per million is established for residues of nickel sulfate (calculated as Ni) in the bran of wheat and oats to be ingested as animal feed or to be converted to animal feed. Such residues may be present therein only as a result of the application of a fungicide containing 19 percent anhydrous nickel sulfate and 53 percent maneb to the growing grain crops treated under an experimental permit issued by the U.S. Department of Agriculture, which expires February 15, 1966, and on which crops temporary pesticide tolerances for nickel sulfate and maneb expiring the same date have been established. No food additive tolerance is necessary for residues of maneb in bran, since the level of residues in the bran is less than the tolerance level for the grain.

§ 121.243 Progesterone.

Progesterone may be safely used in animals when incorporated therein in accordance with the following prescribed conditions:

(a) The additive is the chemical Δ 4-pregnene-3,20-dione ($C_{21}H_{30}O_2$).

(b) It is used or intended for use as prescribed in the following table. The term "principal ingredient" as used in this section refers to the additive named in the heading of this section, and is not intended to imply that the ingredient is of greater value than other additives named.

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
Progesterone...	25 mg. per dose.	Estradiol benzoate.	2.5 mg. per dose.	For lambs weighing between 60 lb. and 85 lb.; for subcutaneous ear implantation, one dose per animal; not to be used within 60 days of slaughter.	Growth promotion and feed efficiency.
Progesterone...	200 mg. per dose.	Estradiol benzoate.	20 mg. per dose.	For steers weighing between 400 lb. and 1,000 lb.; for subcutaneous ear implantation, one dose per animal; not to be used within 60 days of slaughter.	Do.

(c) To assure safe use, the label and labeling of the additive or additives shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.244 Testosterone propionate.

Testosterone propionate may be safely used in animals when incorporated therein in accordance with the following prescribed conditions:

(a) The additive is the chemical 17β-hydroxy-4-androsten-3-one propionate ($C_{22}H_{32}O_3$).

(b) It is used or intended for use as prescribed in the following table. The term "principal ingredient" as used in this section refers to the additive named in the heading of this section and is not intended to imply that the ingredient is of greater value than the other additives named.

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
Testosterone propionate.	200 mg. per dose.	Estradiol benzoate.	20 mg. per dose.	For heifers weighing between 400 lb. and 800 lb.; for subcutaneous ear implantation, one dose per animal; not to be used within 60 days of slaughter; not for dairy heifers.	Growth promotion and feed efficiency.

(c) To assure safe use, the label and labeling of the additive or additives shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.245 Estradiol benzoate.

Estradiol benzoate may be safely used in animals when incorporated therein in accordance with the following prescribed conditions:

(a) The additive is the chemical 1,3,5 (10)-estratriene-3,17β-diol 3-benzoate ($C_{25}H_{28}O_3$).

(b) It is used or intended for use as prescribed in the following table. The term "principal ingredient" as used in this section refers to the additive named in the heading of this section and is not intended to imply that the ingredient is of greater value than the other additives named.

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
Estradiol benzoate.	2.5 mg. per dose.	Progesterone...	25 mg. per dose.	For lambs weighing between 60 lb. and 85 lb.; for subcutaneous ear implantation, one dose per animal; not to be used within 60 days of slaughter	Growth promotion and feed efficiency.
Estradiol benzoate.	20 mg. per dose.	Progesterone...	200 mg. per dose.	For steers weighing between 400 lb. and 1,000 lb.; for subcutaneous ear implantation, one dose per animal; not to be used within 60 days of slaughter.	Do.
Estradiol benzoate.	20 mg. per dose.	Testosterone propionate.	200 mg. per dose.	For heifers weighing between 400 lb. and 800 lb.; for subcutaneous ear implantation, one dose per animal; not to be used within 60 days of slaughter; not for dairy heifers.	Do.

(c) To assure safe use, the label and labeling of the additive or additives shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.246 Mineral oil.

Mineral oil may be safely used in animal feed, subject to the provisions of this section.

(a) Mineral oil, for the purpose of this section, is that complying with the definition and specifications contained in § 121.1146 (a) and (b) or in § 121.2589(b) (1) (i) and (ii).

(b) It is used in animal feeds for the following purposes:

(1) To reduce dustiness of feeds or mineral supplements.

(2) To serve as a lubricant in the preparation of pellets, cubes, or blocks and to improve resistance to moisture of such pellets, cubes, or blocks.

(3) To prevent the segregation of trace minerals in mineralized salt.

(c) The quantity of mineral oil used in animal feed shall not exceed 3.0 percent in mineral supplements, nor shall it exceed 0.06 percent of the total ration when present in feed or feed concentrates.

§ 121.247 Iron-choline citrate complex.

Iron-choline citrate complex made by reacting approximately equimolecular quantities of ferric hydroxide, choline, and citric acid may be safely used as a source of iron in animal feed.

§ 121.248 Nitrofurazone.

Nitrofurazone may be safely used in animal feed when incorporated therein in accordance with the following conditions:

(a) The additive is the chemical 5-nitro-2-furaldehyde semicarbazone ($C_6H_6N_4O_4$).

(b) It is used or intended for use as prescribed in the following table:

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Nitrofurazone	100-200 (0.011%-0.022%)			For mink; 100 gm. per ton for 3 days, then 200 gm. per ton for 21 days; do not repeat (amount of active ingredient calculated on feed before water added). Discard unused mixed feed every 24 hours.	Treatment of gray diarrhea.
2. Nitrofurazone	100 (0.011%)			For mink; feed continuously during susceptible period not to exceed 90 days (amount of active ingredient calculated on feed before water added). Discard unused mixed feed every 24 hours.	Control of gray diarrhea.

(c) To assure safe use, the label and labeling of the additive, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive.

(2) A statement of the quantity of the additive contained therein.

(3) Adequate directions and warnings for use.

§ 121.249 Food additives for use in milk-producing animals.

Formulations containing food additives may be safely used in the treatment of milk-producing animals in accordance with the following prescribed conditions:

(a) The formulation is used or intended for use in the treatment of bovine mastitis by udder instillation, as follows:

(1) (i) It contains the following in each 10 milliliters of suspension:

Hydrocortisone acetate—20 mg.
Hydrocortisone sodium succinate—12.5 mg.
Procaine penicillin G—50,000-100,000 units.
Novobiocin (from sodium novobiocin)—100 mg.-150 mg.
Polymyxin B sulfate—50,000 units.
Dihydrostreptomycin base (sulfate salt)—50 mg.-100 mg.
Chlorobutanol, anhydrous (chloral derivative)—50 mg.
Peanut oil—2 percent aluminum monostearate vehicle, q.s.

(ii) Treat lactating cows with 10 milliliters of suspension in each infected quarter immediately after milking. Treatment may be repeated at intervals of not less than 12 hours.

(iii) Milk that has been drawn from animals within 72 hours of such treatment may not be used for food.

(2) (i) It contains the following in each 15 milliliters of suspension:

Furaltadone (5-(morpholino methyl)-3-[(5-nitrofurfurylidene) amino] - 2-oxazolidinone) 500 mg.

Peanut oil-2 percent (weight per unit volume) aluminum monostearate vehicle, q.s.

(ii) Treat lactating cows with the contents of 15 milliliters in each infected quarter immediately after milking and allow to remain in the quarter until the next milking. Repeat after each milking for a total of three instillations.

(iii) Milk that has been taken from animals during treatment and for 36 hours (3 milkings) after the latest treatment must not be used for food.

(3) (i) It contains the following in each 10 milliliters of suspension:

Prednisolone—10 mg.
Novobiocin (from sodium novobiocin)—100 mg.
Neomycin (from neomycin sulfate)—105 mg.
Procaine penicillin G—100,000 units.
Dihydrostreptomycin (from dihydrostreptomycin sulfate)—100 mg.
Chlorobutanol, anhydrous (chloral derivative)—50 mg.
Peanut oil—2 percent aluminum monostearate vehicle, q.s.

(ii) Treat lactating cows with 10 milliliters of suspension in each infected quarter immediately after milking and allow to remain in the quarter until the next milking. Repeat at 12- and 24-hour intervals if necessary.

(iii) Milk that has been taken from animals during treatment and for 72 hours (6 milkings) after the latest treatment must not be used for food.

(4) (i) It contains the following in each 8 grams of suspension:

Ingredients:	*Quantity*
Prednisone acetate	4 mg.
Procaine penicillin G	100,000 units.
Dihydrostreptomycin (sulfate).	300 mg.
Methylparaben	0.1%.
Propylparaben	0.025%.

Vehicle:	*Inert propellant*
Peanut oil containing 2% aluminum monostearate; 6.3% polyoxyethylene sorbitan tristearate.	Dichlorodifluoromethane; dichlorotetrafluoroethane; nitrogen.

Treat cows with dosage consisting of 8 grams of suspension, expressed as a metered dose, from pressurized containers in each infected quarter immediately after milking, and allow to remain in the quarter until the next milking. Repeat at 12-hour intervals if necessary.

(ii) Milk that has been taken from animals during treatment and for 72 hours (6 milkings) after the latest treatment must not be used for food.

(5) (i) It is sterile. It contains the following in each 15 milliliters of suspension:

Furaltadone (5-(morpholinomethyl)-3-[(5-nitrofurfurylidene)amino] - 2 - oxazolidinone)—500 milligrams.
Procaine penicillin G—100,000 units.
Vehicle: Peanut oil containing 2 percent aluminum monostearate.

(ii) Treat lactating cows with 15 milliliters of suspension in each infected quarter immediately after milking and allow to remain in the quarter until the next milking. Repeat at 12- and 24-hour intervals if necessary.

(iii) Milk taken from animals during treatment and for 96 hours (8 milkings) after the latest treatment must not be used for food.

(6) (i) It contains the following ingredients in each 25 milliliters of suspension:

Neomycin (from neomycin sulfate)	140 mg.
Polymyxin B sulfate	50,000 units
Potassium sorbate	28.75 mg.
Methylcellulose	187.5 mg.
Vehicle: Water (deionized)	q.s.

(ii) Treat lactating cows with 25-milliliter dose in each infected quarter immediately after milking, and allow to remain in the quarter until the next milking. Repeat at 12-hour intervals if necessary.

(iii) Milk that has been taken from animals during treatment and for 72 hours (6 milkings) after the latest treatment must not be used for food.

(7) (i) It contains the following in each 6 milliliters of suspension:

Ingredients:	*Quantity*
Chlortetracycline (as the calcium salt)	200 mg.
Neomycin (as the sulfate)	100 mg.
Calcium chloride (anhydrous)	100 mg.
Sodium sulfite (complying with the specifications appearing in N.F. X)	9 mg.
Ethylenediamine	57 mg.
Distilled monoglycerides	60 mg.
Distilled water	600 mg.
Polyethylene gylcol 400 (U.S.P.)	q.s.

(ii) For use in the treatment of mastitis due to *Streptococcus agalactiae* and *Staphylococcus aureus*. Infuse 6 milliliters into teat canal of each infected quarter. Repeat in 24 hours if necessary.

(iii) Milk taken from animals during treatment and for 84 hours (7 milkings) after the latest treatment must not be used for food.

(b) It is used or intended for use for the removal of scar tissue in the teat canal of milk-producing cows.

(1) (i) It contains in each dose 0.55 gram of salicylic acid (in gum arabic and dextrin vehicle).

(ii) Each dose is incorporated upon a device (teat dilator) suitable for insertion into and subsequent removal from the teat canal.

(iii) It bears labeling which directs the user to:

(*a*) Treat lactating cows initially by inserting dosage and removal of the device;

(*b*) Insert second dose and permit device to remain in canal until the next milking; and

(*c*) Insert one dose following each milking for not more than 2 days.

(iv) Milk that has been drawn from animals within 48 hours of such treatment may not be used for food.

(c) through (v) [Reserved]

(w) To assure safe use, the label and labeling of the formulation shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives contained therein.

(2) A statement of the quantity or quantities of additives contained therein.

(3) Adequate directions and warnings for use, including the warning statement to the effect that: "Milk that has been taken from animals during treatment and for ____ hours (____ milkings) after the latest treatment must not be used for food," the blanks being filled in with the figures specified in the applicable subparagraph of any paragraph in this section.

§ 121.250 Calcium silicate.

Calcium silicate, including synthetic calcium silicate, may be safely used as an anticaking agent in animal feed, provided that the amount of calcium silicate does not exceed 2 percent.

§ 121.251 Oxytetracycline.

The food additive oxytetracycline may be safely used in accordance with the following prescribed conditions:

(a) Oxytetracycline is the antibiotic substance produced by growth of Streptomyces rimosus or the same antibiotic substance produced by any other means, and for the purposes of this section refers to oxytetracycline as the specified salt.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of oxytetracycline hydrochloride.

(c) Permitted uses of oxytetracycline alone and with certain other additives in medicated feeds are described in tabular form in this section, and the tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone or with additional ingredients added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(d) It is used or intended for use in feeds as follows:

TABLE 1—OXYTETRACYCLINE IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Oxytetracycline	50	----------	----------	For chickens and turkeys; as the mono-alkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	During times of stress, for prevention of diseases named in this section caused by organisms susceptible to the named levels of the oxytetracycline salt.
a. 1	50	Amprolium	36.3-227	§ 121.210(c), table 1, items 1.1, 2.1 3.1.	§ 121.210(c), table 1, items 1.1, 2.1, 3.1.
b. 1	50	Zoalene	36.3-170.3	§ 121.207(c), table 1, items 1, 2.1, 3.1.	§ 121.207(c), table 1, items 1, 2.1, 3.1.
2. Oxytetracycline	50-100	----------	----------	For chickens; as the mono-alkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	Prevention of blue comb (nonspecific infectious enteritis).
a. 2	50-100	Amprolium	36.3-227	§ 121.210(c), table 1, items 2.1, 3.1.	§ 121.210(c), table 1, items 2.1, 3.1.
b. 2	50-100	Zoalene	36.3-170.3	§ 121.207(c), table 1, items 2.1, 3.1.	§ 121.207(c), table 1, items 2.1, 3.1.
3. Oxytetracycline	50-100	----------	----------	For turkeys; as the mono-alkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	Prevention of hexamitiasis.
a. 3	50-100	Amprolium	113.5-227	§ 121.210(c), table 1, item 1.1.	§ 121.210(c), table 1, item 1.1.
b. 3	50-100	Zoalene	113.5-170.3	§ 121.207(c), table 1, item 1.	§ 121.207(c), table 1, item 1.
c. 3	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	§ 121.262, table 1, item 2.1.	§ 121.262, table 1, item 2.1.
4. Oxytetracycline	50-100	----------	----------	For chicks (first two weeks of life); for poults (first four weeks of life); as the mono-alkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	Prevention of early mortality of chicks and poults due to organisms susceptible to the oxytetracycline salt.
a. 4	50-100	Amprolium	36.3-227	§ 121.210(c), table 1, items 1.1, 2.1, 3.1.	§ 121.210(c), table 1, items 1.1, 2.1, 3.1.
b. 4	50-100	Zoalene	36.3-170.3	§ 121.207(c), table 1, items 1, 2.1, 3.1.	§ 121.207(c), table 1, items 1, 2.1, 3.1.
5. Oxytetracycline	100-200	----------	----------	For turkeys; as the mono-alkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	Control of infectious sinusitis; prevention of infectious synovitis.
a. 5	100-200	Amprolium	113.5-227	§ 121.210(c), table 1, item 1.1.	§ 121.210(c), table 1, item 1.1.
b. 5	100-200	Zoalene	113.5-170.3	§ 121.207(c), table 1, item 1.	§ 121.207(c), table 1, item 1.
6. Oxytetracycline	100-200	----------	----------	For chickens; as the mono-alkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	Prevention of complicated chronic respiratory disease (air-sac infection) and control of complicated chronic respiratory disease by lowering mortality and severity during outbreaks; prevention of fowl cholera.
a. 6	100-200	Amprolium	36.3-227	§ 121.210(c), table 1, items 2.1, 3.1.	§ 121.210(c), table 1, items 2.1, 3.1.
b. 6	100-200	Zoalene	36.3-113.5	§ 121.207(c), table 1, items 2.1, 3.1.	§ 121.207(c), table 1, items 2.1, 3.1.
c. 6	100-200	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	§ 121.262, table 1, item 1.1.	§ 121.262, table 1, item 1.1.
7. Oxytetracycline	100-200	----------	----------	For turkeys; as the monoalkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline.	Control of blue comb (nonspecific infectious enteritis, mud fever); treatment of hexamitiasis.
a. 7	100-200	Amprolium	113.5-227	§ 121.210(c), table 1, item 1.1.	§ 121.210(c), table 1, item 1.1.
b. 7	100-200	Zoalene	113.5-170.3	§ 121.207(c), table 1, item 1.	§ 121.207(c), table 1, item 1.
8. Oxytetracycline	100-200	----------	----------	For chickens; as the monoalkyl (C_8-C_{18}) trimethyl ammonium salt of oxytetracycline in low-calcium feed containing 0.18 to 0.55% dietary calcium; not to be fed continuously for more than 5 days; low calcium feeds may be fed for a total of three 5-day periods through the first 10 weeks of life with an interim period of 5 days between each low-calcium feeding. Not to be fed to laying chickens.	Treatment of blue comb (nonspecific infectious enteritis); prevention of infectious synovitis; control of complicated chronic respiratory disease (air-sac infection) by lowering mortality and severity of disease during outbreaks; reduction of lesions and mortality due to organisms susceptible to oxytetracycline in the presence of complicated chronic respiratory disease (air-sac infection).
a. 8	100-200	Amprolium	36.3-227	§ 121.210(c), table 1, items 2.1, 3.1.	§ 121.210(c), table 1, items 2.1, 3.1.
b. 8	100-200	Zoalene	36.3-227	§ 121.207(c), table 1, items 2.1, 3.1.	§ 121.207(c), table 1, items 2.1, 3.1.

TABLE 1—OXYTETRACYCLINE IN COMPLETE CHICKEN AND TURKEY FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
9. Oxytetracycline	200			For chickens; as the monoalkyl(C_8–C_{18})trimethyl ammonium salt of oxytetracycline in low-calcium feed containing 0.18–0.55% dietary calcium; not to be fed continuously for more than 5 days; low-calcium feeds may be fed for a total of three 5-day periods through the first 10 weeks of life with an interim period of 5 days between each low-calcium feeding. Not to be fed to laying chickens.	Prevention of avian infectious hepatitis; prevention and control of E. tenella, cause of cecal coccidiosis.
a. 9	200	Amprolium	36.3–227	§ 121.210(c), table 1, items 2.1, 3.1.	§ 121.210(c), table 1, items 2.1, 3.1.
b. 9	200	Zoalene	36.3–113.5	§ 121.207(c), table 1, items 2.1, 3.1.	§ 121.207(c), table 1, items 2.1, 3.1.
10. Oxytetracycline	200			For chickens; as the monoalkyl (C_8–C_{18}) trimethyl ammonium salt of oxytetracycline.	Control of infectious synovitis.
a. 10	200	Amprolium	36.3–227	§ 121.210(c), table 1, items 2.1, 3.1.	§ 121.210(c), table 1, items 2.1, 3.1.
b. 10	200	Zoalene	36.3–113.5	§ 121.207(c), table 1, items 2.1, 3.1.	§ 121.207(c), table 1, items 2.1, 3.1.
11. Oxytetracycline	200			For turkeys; as the monoalkyl (C_8–C_{18}) trimethyl ammonium salt of oxytetracycline.	Control of infectious synovitis.
a. 11	200	Amprolium	113.5–227	§ 121.210(c), table 1, item 1.1.	§ 121.210(c), table 1, item 1.1.
b. 11	200	Zoalene	113.5–170.3	§ 121.207(c), table 1, item 1.	§ 121.207(c), table 1, item 1.
12. Oxytetracycline	200			For chickens; as the monoalkyl (C_8–C_{18}) trimethyl ammonium salt of oxytetracycline; in low-calcium feed containing 0.18 to 0.55% dietary calcium; for 2 weeks from outbreak of disease, 5 days of low calcium and the remaining period on normal calcium; not to be fed to laying chickens.	Control of fowl cholera during periods of outbreaks.
a. 12	200	Amprolium	36.3–227	§ 121.210(c), table 1, items 2.1, 3.1.	§ 121.210(c), table 1, items 2.1, 3.1.
b. 12	200	Zoalene	36.3–113.5	§ 121.207(c), table 1, items 2.1, 3.1.	§ 121.207(c), table 1, items 2.1, 3.1.

TABLE 2—OXYTETRACYCLINE IN CATTLE FEED

Principal ingredient	Mg. per head per day	Combined with—	Mg. per head per day	Limitations	Indications for use
1. Oxytetracycline	75–80			For beef cattle weighing over 400 lb.; as the monoalkyl (C_8–C_{18}) trimethyl ammonium salt of oxytetracycline.	Reduction of the incidence and severity o' liver abscesses.
a. Oxytetracycline	75–80	Diethylstilbestrol	10	§ 121.241(b), item 1	Fattening of beef cattle.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.252 Bacitracin methylene disalicylate.

The food additive bacitracin methylene disalicylate may be safely used in animal feed in accordance with the following prescribed conditions:

(a) Bacitracin methylene disalicylate is the methylene disalicylate salt of the antibiotic substance produced by growth of Bacillus subtilis var. Tracy or the same antibiotic substance produced by any other means, and for the purposes of this section refers to bacitracin methylene disalicylate or feed grade bacitracin methylene disalicylate.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of bacitracin methylene disalicylate alone and with certain other additives in medicated feeds are described in tabular form in this section. These tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with another ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the principal ingredient. Where principal and secondary ingredients have been mixed, the applicable "limitations" and "indications for use" from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the the regulations, the principal ingredient may not be mixed with one or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal

ingredient or principal ingredient combination indicated by the cross-reference is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section but may include other ingredients listed as numbered line items. Such term is not intended to imply that the ingredient or combination is of greater value than any other additives named in this section.

(d) The additive is used or intended for use as follows:

TABLE 1—BACITRACIN METHYLENE DISALICYLATE IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1. Bacitracin	10–50			For chickens; 50 gm. per ton first 4 to 6 weeks of egg production; 10–50 gm. per ton for remainder of egg-laying period; as bacitracin methylene disalicylate.	Maintaining or increasing egg production.
1.2. Bacitracin plus penicillin.	10–50			For chickens; 12.5 gm. of penicillin plus 37.5 gm. of bacitracin first 4 to 6 weeks of egg production; not less than 2.5 gm. nor more than 12.5 gm. of penicillin plus not less than 7.5 gm. nor more than 37.5 gm. of bacitracin for remainder of laying period; as procaine penicillin plus bacitracin methylene disalicylate.	Do
a. 1.1 or 1.2	10–50	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
2.1. Bacitracin	50–100			For chickens; as bacitracin methylene disalicylate.	Prevention of chronic respiratory disease (airsac infection); blue comb (nonspecific infectious enteritis).
2.2. Bacitracin plus penicillin.	50–100			For chickens; 50–100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin plus bacitracin methylene disalicylate.	Do.
a. 2.1	50–100	Amprolium	36.3–227	For chickens; not for laying chickens; as prescribed in § 121.210(c), table 1, items 2.1 and 3.1.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 2.1	50–100	Amprolium plus ethopabate.	113.5–227 3.6	For broiler chickens; not for laying chickens; as prescribed § 121.210(c) table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
c. 2.1 or 2.2	50–100	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
d. 2.1	50–100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	For chickens; as prescribed in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
3.1. Bacitracin	50–100			For turkeys; as bacitracin methylene disalicylate.	Prevention of infectious sinusitis, blue comb (mud fever).
3.2. Bacitracin plus penicillin.	50–100			For turkeys; 50–100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin plus bacitracin methylene disalicylate.	Do.
a. 3.1	50–100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	For turkeys; as prescribed in § 121.262(c), table 1, item 2.1.	§ 121.262(c), table 1, item 2.1.
4.1. Bacitracin	100			For chickens; as bacitracin methylene disalicylate.	Maintaining or increasing hatchability of eggs.
4.2. Bacitracin plus penicillin.	100			For chickens; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as procaine penicillin plus bacitracin methylene disalicylate.	Maintaining or increasing hatchability of eggs.
a. 4.1 or 4.2	100	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
5.1. Bacitracin	100			For chickens; as bacitracin methylene disalicylate.	During times of stress, prevention of diseases named in this section caused by organisms susceptible to bacitracin.
5.2. Bacitracin plus penicillin.	100			For chickens; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as procaine penicillin plus bacitracin methylene disalicylate.	During times of stress, prevention of diseases named in this section caused by organisms susceptible to penicillin plus bacitracin.
a. 5.1	100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4	For chickens; as prescribed in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
6.1. Bacitracin	100			For chicks; in starter ration; as bacitracin methylene disalicylate.	Prevention of early mortality of chicks due to organisms susceptible to the bacitracin methylene disalicylate salt.
6.2. Bacitracin plus penicillin.	100			For chicks; in starter ration; 100 gm. of combination; 75 gm. of bacitracin plus 25 gm. of penicillin; as bacitracin methylene disalicylate plus procaine penicillin.	Prevention of early mortality of chicks due to organisms susceptible to bacitracin methylene disalicylate and penicillin.
a. 6.1 or 6.2	100	Hygromycin B	8–12	For chicks; in starter ration.	§ 121.213(d), table 1, item 1.
7.1. Bacitracin	100–200			For chickens; as bacitracin methylene disalicylate.	Treatment of chronic respiratory disease (airsac infection); blue comb (nonspecific infectious enteritis).
7.2. Bacitracin plus penicillin.	100–200			For chickens; 100–200 gm. of combination; not less than 25 gm. of penicillin nor less than 50 gm. of bacitracin; as procaine penicillin plus bacitracin methylene disalicylate.	Do.
a. 7.1	100–200	Amprolium	36.3–227	For chickens; not for laying chickens; as prescribed in § 121.210(c), table 1, items 2.1 and 3.1.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 7.1	100–200	Amprolium plus ethopabate.	113.5–227 3.6	For broiler chickens; not for laying chickens; as prescribed in § 121.210 (c), table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
c. 7.1 or 7.2	100	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
8.1. Bacitracin	100–200			For turkeys; as bacitracin methylene disalicylate.	Treatment of infectious sinusitis, blue comb (mud fever).
8.2. Bacitracin plus penicillin.	100–200			For turkeys; 100–200 gm. of combination; not less than 25 gm. of penicillin nor less than 50 gm. of bacitracin; as procaine penicillin plus bacitracin methylene disalicylate.	Do.

TABLE 2—BACITRACIN METHYLENE DISALICYLATE IN COMPLETE SWINE FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Bacitracin	50–100			For swine; as bacitracin methylene disalicylate.	Aid in the prevention of bacterial swine enteritis.
1.2 Bacitracin + penicillin.	50–100			For swine; 50–100 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin; as bacitracin methylene disalicylate + procaine penicillin.	Do.
2.1 Bacitracin	100			For swine; as bacitracin methylene disalicylate.	Treatment of bacterial swine enteritis.
2.2 Bactracin + penicillin.	100			For swine; 100 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin; as bacitracin methylene disalicylate + procaine penicillin.	Do.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.253 Arsanilic acid.

Arsanilic acid may be safely used in animal feed when incorporated therein in accordance with the following conditions:

(a) The additive is the chemical p-aminobenzenearsonic acid ($C_6H_8AsNO_3$) conforming to the following specifications (on the dry basis):

(1) The additive contains not less than 34 percent and not more than 34.8 percent of arsenic (As), equivalent to not less than 98.5 percent and not more than 100.8 percent $C_6H_8AsNO_3$.

(2) The additive contains not more than 0.025 percent arsenic as inorganic arsenite, calculated as As_2O_3 and not more than 0.05 percent arsenic as inorganic arsenate, calculated as $AsO_4 \equiv$.

(b) Permitted uses of arsanilic acid alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone or with an additional ingredient added for increased effectiveness.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the heading of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(c) It is used or intended for use in feeds, as follows:

ARSANILIC ACID IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Arsanilic acid	90 (0.01%)			For chickens and turkeys; withdraw 5 days before slaughter.	Growth promotion and feed efficiency; improving pigmentation.
1.2 Arsanilic acid	90 (0.01%)	Penicillin	2.4–50	For broiler chickens; as procaine penicillin; withdraw 5 days before slaughter.	Do.
1.3 Arsanilic acid	90 (0.01%)	Penicillin + streptomycin.	14.4–50	For broiler chickens; as procaine penicillin + streptomycin sulfate; 14.4–50 gm. of combination containing 16.7% of penicillin; withdraw 5 days before slaughter.	Do.
a. 1.1, 1.2, or 1.3	90	Amprolium	36.3–227 (0.004%–0.025%)	§ 121.210, table 1, items 1.1, 2.1, 3.1.	§ 121.210, table 1, items 1.1, 2.1, 3.1.
b. 1.1, 1.2, or 1.3	90	do.	113.5–227 (0.0125%–0.025%)	§ 121.210, table 1, item 2.1.	§ 121.210, table 1, item 2.1.
c. 1.1, 1.2, or 1.3	90	do.	113.5–227 (0.0125%–0.025%)	§ 121.210, table 1, item 2.2.	§ 121.210, table 1, item 2.2.
		+ Ethopabate	3.6 (0.0004%)		
d. 1.1	90	Zoalene, with or without:	36.3–170.3 (0.004%–0.01875%)	For chickens and turkeys; as prescribed in § 121.207, table, items 1, 2.1, 3.1.	§ 121.207 table, items 1, 2.1, 3.1.
		i. Penicillin	2.4–50	For chickens; as prescribed in § 121.207, table, items 2.1, 3.1; as procaine penicillin.	§ 121.207, table, items 2.1, 3.1.
		ii. Penicillin plus bacitracin.	3.6–50	For chickens; as prescribed in § 121.207, table, items 2.1, 3.1; not less than 0.6 gm. of penicillin nor less than than 3 gm. of bacitracin; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Do.
		iii. Bacitracin	4–50	For chickens; as prescribed in § 121.207, table, items 2.1, 3.1; as bacitracin, bacitracin methylene, disalicylate, manganese bacitracin, or zinc bacitracin.	Do.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

(e) Section 121.1138 establishes the limitation for residues of the additive in food for human consumption.

§ 121.254 Sodium arsanilate.

Sodium arsanilate may be safely used in animal feed when incorporated therein in accordance with the following conditions.

(a) The additive is the chemical sodium p-aminobenzenearsonate ($C_6H_7AsNNaO_3$) conforming to the following specifications (on the dry basis):

(1) The additive contains not less than 30.87 percent and not more than 31.65 percent of arsenic (As), equivalent to not less than 98.5 percent and not more than 101 percent of $C_6H_7AsNNaO_3$.

(2) The additive contains not more than 0.025 percent arsenic as inorganic arsenite, calculated as As_2O_3 and not more than 0.05 percent arsenic as inorganic arsenate, calculated as $AsO_4\equiv$.

(b) Permitted use of sodium arsanilate alone and with certain other additives is described in tabular form in this section and this table is to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone or with an additional ingredient added for increased effectiveness.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the heading of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(c) It is used or intended for use in feeds, as follows:

SODIUM ARSANILATE IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
Sodium arsanilate.	90 (0.01%)			For chickens and turkeys; withdraw 5 days before slaughter.	Growth promotion and feed efficiency; improving pigmentation.
a. Sodium arsanilate.	90	Amprolium...	36.3-227 (0.004%-0.025%).	For chickens and turkeys; as prescribed in § 121.210, table 1, items 1.1, 2.1, 3.1.	§ 121.210, table 1, items 1.1, 2.1, 3.1.
b. Sodium arsanilate.	90	Zoalene........	36.3-170.3 (0.004%-0.01875%).	For chickens and turkeys; as prescribed in § 121.207, table, items 1, 2, 3.	§ 121.207, table, items 1, 2, 3.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.255 Furazolidone.

Furazolidone may be safely used in animal feed when incorporated therein in accordance with the following conditions:

(a) The additive is the chemical 3-(5-nitrofurfurylideneamino)-2-oxazolidinone, $C_8H_7N_3O_5$.

(b) Permitted uses of furazolidone alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone or with an additional ingredient added for increased effectiveness.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided for by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section, and is not intended to imply that the ingredient is of greater value than any other additive named in this section.

(c) It is used or intended for use in feed, as follows:

FURAZOLIDONE IN ANIMAL FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Furazolidone...	150 (0.0165%).			For sows; feed 1 week before farrowing and 2 weeks after farrowing.	Prevention of bacterial scours in baby pigs; growth promotion while on medication.
2. Furazolidone...	100-200 (0.011%-0.022%).			For swine, as follows: 100 gm. per ton for 5 weeks or 150 gm. per ton for 3 weeks; or 200 gm. per ton for 2 weeks.	Prevention of bacterial enteritis (necrotic enteritis, necro) and vibrionic (bloody) dysentery; growth promotion while on medication.
3. Furazolidone...	300 (0.033%).			For swine; feed 10-14 days.	Treatment of bacterial enteritis (necrotic enteritis, necro) and vibrionic (bloody) dysentery, while on medication; growth promotion while on medication.

(d) To assure safe use, the label and labeling of the additive and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.256 Procaine penicillin.

The food additive procaine penicillin may be safely used in accordance with the following prescribed conditions:

(a) Procaine penicillin is the procaine salt of the antibiotic substance produced by the growth of *Penicillium notatum* or *Penicillium chrysogenum* or the same antibiotic substance produced by any other means, and for the purposes of this Part 121 refers to procaine penicillin or feed-grade procaine penicillin.

(b) The antibiotic activities authorized are expressed in this section in terms of the weight of the appropriate antibiotic standard.

(c) Permitted uses of procaine penicillin alone and with certain other additives in medicated feeds are described in tabular form in this section and the tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with another ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the principal ingredients indicated by the numbered entry in the "principal ingredient" column. Where

principal and secondary ingredients have been mixed, the applicable "limitations" and "indications for use" from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredients and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredients may not be mixed with secondary ingredients.

(4) Where cross-references specify a particular table and numbered line item of another section, use of only the principal ingredient or principal ingredient combination indicated by the cross-reference is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section but may include other ingredients listed as numbered line items. Such term is not intended to imply that the ingredient or combination is of greater value than any other additives named in this section.

(d) The additive is used or intended for use as follows:

TABLE 1—PROCAINE PENICILLIN IN COMPLETE CHICKEN AND TURKEY FEEDS

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 Penicillin + bacitracin.	10-50			For chickens; 12.5 gm. of penicillin + 37.5 gm. of bacitracin first 4 to 6 weeks of egg production; not less than 2.5 gm. nor more than 12.5 gm. of penicillin + not less than 7.5 gm. nor more than 37.5 gm. of bacitracin for remainder of laying period; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Maintaining or increasing egg production.
a. 1.1	10-50	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
2.1 Penicillin + streptomycin.	22.5-50			For chickens; 22.5-50 gm. of combination, containing 16.7 percent of penicillin; as procaine penicillin + streptomycin sulfate.	Maintaining or increasing egg production.
a. 2.1	22.5-50	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
3.1 Penicillin	50-100			For chickens; as procaine penicillin.	Prevention of chronic respiratory disease (air-sac infection); blue comb (nonspecific infectious enteritis).
3.2 Penicillin + bacitracin.	50-100			For chickens; 50-100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Do.
a. 3.1 or 3.2	50-100	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
b. 3.1	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For chickens; as provided in § 121.262(c), table 1, item 1.1.	§ 121.262(c), table 1, item 1.1.
4.1 Penicillin	50-100			For turkeys; as procaine penicillin.	Prevention of infectious sinusitis, blue comb (mud fever).
4.2 Penicillin + bacitracin.	50-100			For turkeys; 50-100 gm. of combination; not less than 12.5 gm. of penicillin nor less than 25 gm. of bacitracin; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Do.
4.2 Penicillin + bacitracin—Continued					
a. 4.1	50-100	3-Nitro-4-hydroxyphenylarsonic acid.	22.7-45.4	For turkeys; as prescribed in § 121.262(c), table 1, item 2.1.	§ 121.262(c), table 1, item 2.1.
5.1 Penicillin + streptomycin.	90-180			For chickens; 90-180 gm. of combination, containing 16.7 percent of penicillin; as procaine penicillin + streptomycin sulfate.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis).
a. 5.1	90-180	Amprolium	36.3-227	Not for laying chickens; as prescribed in § 121.210(c), table 1, items 2.1 and 3.1.	§ 121.210(c), table 1, items 2.1 and 3.1.
b. 5.1	90-180	Amprolium + ethopabate.	113.5-227 3.6	Not for laying chickens; as prescribed in § 121.210(c), table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
c. 5.1	90-180	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
6.1 Penicillin + streptomycin.	90			For chickens; 90 gm. of combination, containing 16.7 percent of penicillin; as procaine penicillin + streptomycin sulfate.	Maintaining or increasing hatchability of eggs.
a. 6.1	90	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
7.1 Penicillin + streptomycin.	90-180			For turkeys; 90-180 gm. of combination containing 16.7 percent of penicillin; as procaine penicillin + streptomycin sulfate.	Treatment of infectious sinusitis, blue comb (mud fever), hexamitiasis.
a. 7.1	90-180	Amprolium	113.5-227	As prescribed in § 121.210(c), table 1, item 1.1.	§ 121.210(c), table 1, item 1.1.
8.1 Penicillin + streptomycin.	90			For chicks; in starter ration; 90 gm. of combination containing 16.7% of penicillin; as procaine penicillin + streptomycin sulfate.	Prevention of early mortality caused by organisms susceptible to penicillin + streptomycin.
a. 8.1	90	Amprolium	36.3-227	As prescribed in § 121.210(c), table 1, items 2.1 and 3.1.	§ 121.210(c), table 1 items 2.1 and 3.1.
b. 8.1	90	Amprolium + ethopabate.	113.5-227 3.6	As prescribed in § 121.210(c), table 1, item 2.2.	§ 121.210(c), table 1, item 2.2.
c. 8.1	90	Hygromycin B	8-12	For chicks	§ 121.213(d), table 1, item 1.
9.1 Penicillin	100			For chickens; as procaine penicillin.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis).
a. 9.1	100	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
10.1 Penicillin + bacitracin.	100			For chickens; 100 gm. of combination; 25 gm. of penicillin + 75 gm. of bacitracin; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Maintaining or increasing hatchability of eggs.
a. 10.1	100	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
11.1 Penicillin + bacitracin.	100-200			For chickens; 100-200 gm. of combination; not less than 25 percent of penicillin + not less than 50 percent of bacitracin; as procaine penicillin + bacitracin methylene disalicylate.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis).
a. 11.1	100-200	Hygromycin B	8-12	For chickens	§ 121.213(d), table 1, item 1.
12.1 Penicillin + bacitracin.	100			For chickens; 100 gm. of combination; 25 gm. of penicillin + 75 gm. of bacitracin; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	During times of stress; prevention of diseases caused by organisms susceptible to a combination of penicillin and bacitracin.

TABLE 1—PROCAINE PENICILLIN IN COMPLETE CHICKEN AND TURKEY FEEDS—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
13.1 Penicillin + bacitracin.	100			For chicks; in starter ration: 100 gm. of combination; 25 gm. of penicillin+75 gm. of bacitracin; as procaine penicillin + bacitracin methylene disalicylate.	Prevention of early mortality of chicks due to organisms susceptible to a combination of penicillin and bacitracin.
a. 13.1	100	Hygromycin B	8–12	For chicks; in starter ration	§ 121.213(d), table 1, item 1.
14.1 Penicillin	100			For turkeys; as procaine penicillin.	Treatment of infectious sinusitis, blue comb (mud fever).
14.2 Penicillin + bacitracin.	100–200			For turkeys; 100–200 gm. of combination; not less than 25 percent of penicillin + not less than 50 percent of bacitracin; as procaine penicillin + bacitracin methylene disalicylate.	Do.
15.1 Penicillin + bacitracin.	100–500			For chicks; in starter ration; 100–500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin, except that it contains not more than 125 gm. of penicillin; as procaine penicillin + bacitracin or zinc bacitracin.	Prevention of early mortality of chicks due to organisms susceptible to combinations of penicillin and bacitracin.
16.1 Penicillin + bacitracin.	100–500			For chickens; combination containing not less than 50 percent nor more than 75 percent of bacitracin, except that it contains not more than 125 gm. of penicillin; as procaine penicillin+bacitracin or zinc bacitracin.	Treatment of chronic respiratory disease (air-sac infection), blue comb (nonspecific infectious enteritis).
a. Penicillin+ bacitracin.	100–250	Hygromycin B	8–12	For chickens	§ 121.213(d), table 1, item 1.
17.1 Penicillin + bacitracin.	100–500			For turkeys; 100–500 gm. of combination, containing not less than 50 percent nor more than 75 percent of bacitracin, except that it contains not more than 125 gm. of penicillin; as procaine penicillin+bacitracin or zinc bacitracin.	Treatment of infectious sinusitis, blue comb (mud fever).

TABLE 2—PROCAINE PENICILLIN IN COMPLETE SWINE FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Penicillin + bacitracin.	50–100			For swine; 50–100 gm. of combination, containing not less than 25 percent and not more than 50 percent of penicillin; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Aid in the prevention of bacterial swine enteritis.
2. Penicillin + streptomycin.	45–90			For swine; 45–90 gm. of combination, containing 16.7 percent of penicillin; as procaine penicillin + streptomycin sulfate.	Do.

TABLE 2—PROCAINE PENICILLIN IN COMPLETE SWINE FEED—Continued

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
3. Penicillin + bacitracin.	100			For swine; 100 gm. of combination, containing not less than 25 percent and not more than 50 percent of penicillin; as procaine penicillin + bacitracin, bacitracin methylene disalicylate, or zinc bacitracin.	Treatment of bacterial swine enteritis.
4. Penicillin + streptomycin.	90			For swine; 90 gm. of combination, containing 16.7 percent of penicillin; as procaine penicillin + streptomycin sulfate.	Do.
5. Penicillin + streptomycin.	90–270			For swine; 90–270 gm. of combination containing 16.7 percent of penicillin; feed not more than 14 days; as procaine penicillin+streptomycin sulfate.	Do.

(e) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive premix, feed additive concentrate, feed additive supplement, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.257 Estradiol monopalmitate.

Estradiol monopalmitate may be safely used in animals in accordance with the following prescribed conditions:

(a) The additive is the chemical 1,3,5 (10)-estratriene-3, 17β-diol 17-palmitate ($C_{34}H_{54}O_3$), conforming to the specifications prescribed in this paragraph:

(1) The melting point range of estradiol monopalmitate is 81° C.–85° C. (method U.S.P. XVI, Procedure for Class Ia).

(2) After saponification of the additive as described in subparagraph (3) of this paragraph, the melting point of the isolated estradiol ranges from 173° C. to 179° C. and the melting point of the isolated palmitic acid is 63° C.

(3) Saponification of the additive is accomplished by refluxing about 0.2 gram of the additive with 3 milliliters of half-normal alcoholic potassium hydroxide solution on a water bath for 2 hours. Phenolphthalein solution is added and the excess potassium hydroxide is titrated with 0.1*N* hydrochloric acid. One milliliter of 5-normal sodium hydroxide solution is added to the titrated solution and the alcohol removed by warming on the steam bath. After addition of 10 milliliters of water, the solution is cooled to room temperature. The precipitate is filtered through a sintered glass filter and washed with 3 milliliters of water. Carbon dioxide is passed through the filtrate for about 5 minutes. The precipitated crystals are filtered through a sintered glass filter, washed neutral with water, and dried at 105° C. The isolated estradiol shall meet the melting point range specified in subparagraph (2) of this paragraph. The precipitate from the filtrate is transferred into a glass beaker and warmed with 15 milliliters of 12½ percent hydrochloric acid. The precipitated palmitic acid is filtered off, washed with water, and dried. The melting point of the isolated palmitic acid corresponds to the figure specified in subparagraph (2) of this paragraph.

(b) The additive is used or intended for use as prescribed in the following table. The term "principal ingredient" as used in this table refers to the additive named in the heading of this section.

ESTRADIOL PALMITATE IN CHICKENS

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
Estradiol monopalmitate.	10 mg. per dose.	Vehicle of polyethylene glycol 200+polyethylene glycol 4,000.	----------	For roasting chickens; one dose per bird by injection under skin at base of skull at not less than 5 weeks of age; not to be used within 6 weeks of slaughter; the polyethylene glycols used conform to § 121.259.	Produce more uniform fat distribution; improve finish.

(c) To assure safe use the label and the labeling of the additive or additives shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.258 Dimetridazole.

Dimetridazole may be safely used in accordance with the following conditions:

(a) The additive is the chemical 1,2-dimethyl-5-nitroimidazole, $C_5H_7O_2N_3$, conforming to the following specifications:

(1) Melting point 137° C. to 141° C.

(2) Assay (dry basis) 98 to 101 percent (by titration with perchloric acid in acetic acid).

(b) Permitted uses of dimetridazole alone are described in tabular form in this section.

(c) It is used or intended for use as follows:

TABLE 1—DIMETRIDAZOLE IN DRINKING WATER

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
	Percent				
1. Dimetridazole	0.01	----------	----------	For turkeys; as sole source of drinking water; not for laying birds; withdraw 3 days before slaughter; as sole source of dimetridazole.	Prevention of blackhead.
2. Dimetridazole	0.02	----------	----------	do	Treatment of blackhead.
3. Dimetridazole	0.04	----------	----------	For turkeys; as sole source of drinking water; treat for 5 days only; not for laying birds; withdraw 5 days before slaughter; as sole source of dimetridazole.	Treatment of severe outbreaks of blackhead.

TABLE 2—DIMETRIDAZOLE IN COMPLETE TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Dimetridazole	136-182 (0.015-0.02%)	----------	----------	For turkeys; withdraw 5 days before slaughter; as sole source of dimetridazole; eggs not to be used for food purposes.	Prevention of blackhead (histomoniasis, infectious enterohepatitis).
2. Dimetridazole	544-725 (0.06-0.08%)	----------	----------	For turkeys; feed for not more than 7 days; withdraw 5 days before slaughter; as sole source of dimetridazole; eggs not to be used for food purposes.	As an aid in the control of blackhead (histomoniasis, infectious enterohepatitis).

(d) To assure safe use, the label and labeling of the additive, any combination of additives, any final dosage form, and any feed additive premix, feed additive concentrate, feed additive supplement, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities of each additive contained therein.

(3) Adequate directions and warnings for use.

(e) Section 121.1167 establishes the limitations for residues of the additive in food for human consumption.

§ 121.259 Polyethylene glycols.

The following polyethylene glycols may be safely used in animals in accordance with the following prescribed conditions:

(a) *Polyethylene glycol 200.* Polyethylene glycol 200 is a condensation product of ethylene oxide and water, conforming to the following specifications:

(1) Average molecular weight 190–210.

(2) Total ethylene and diethylene glycol content not to exceed 10 percent by weight.

(b) *Polyethylene glycol 4000.* Polyethylene glycol 4000 is a condensation product of ethylene oxide and water conforming to the following specifications:

(1) U.S.P. XVII specifications.

(2) Total ethylene and diethylene glycol content not to exceed 0.15 percent by weight.

(c) through (l) [Reserved]

(m) The additive is used or intended for use as a vehicle in accordance with the provisions of other regulations in this Subpart C.

§ 121.260 Thiabendazole.

Thiabendazole may be safely used in the treatment of food-producing animals in accordance with the following conditions:

(a) The additive is the chemical 2-[4′-thiazolyl]-benzimidazole, $C_{10}H_7N_3S$, conforming to the following specifications:

(1) Ultraviolet assay (*A* 1 percent 0.1n HCl, 1 cm., 302 mμ= 95–103 percent.

(2) Ultraviolet identity ratio (A_{243}/A_{302})=0.485–0.520.

(3) Melting range 296° to 303° C.

(4) Heavy metals (as lead) maximum 0.005 percent.

(b) Permitted uses of thiabendazole are described in tabular form in this section.

(c) The additive is used or intended for use as follows:

TABLE 1—MISCELLANEOUS

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
1. Thiabendazole	3 gm. per 100 lb. body weight.	----------	----------	For cattle; as a single oral dose; as a drench or tablet; may repeat once in 2 to 3 weeks; do not treat animals within 30 days of slaughter; milk taken from treated animals within 96 hours (8 milkings) after the latest treatment must not be used for food.	Treating infestations of gastrointestinal roundworms (genera *Trichostrongylus spp.*, *Haemonchus spp.*, *Ostertagia spp.*).
2. Thiabendazole	5 gm. per 100 lb. body weight.	----------	----------	do	Treating severe infestations of gastrointestinal roundworms (genera *Trichostrongylus spp.*, *Haemonchus spp.*, *Ostertagia spp.*); treatment of infestations of *Cooperia* species.

TABLE 2—THIABENDAZOLE IN FEED

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
1. Thiabendazole	3 gm. per 100 lb. body weight.	----------	----------	For cattle; 3 gm. per 100 lb. body weight at a single dose; may repeat once in 2 to 3 weeks; do not treat animals within 30 days of slaughter; milk taken from treated animals within 96 hours (8 milkings) after the latest treatment must not be used for food.	Treatment of infestations of gastrointestinal roundworms (genera *Trichostrongylus spp., Haemonchus spp., Ostertagia spp.*).
2. Thiabendazole	5 gm. per 100 lb. body weight.	----------	----------	For cattle; 5 gm. per 100 lb. body weight at a single dose or divided into 3 equal doses, administered 1 dose each day, on succeeding days; may repeat once in 2 to 3 weeks; do not treat animals within 30 days of slaughter; milk taken from treated animals within 96 hours (8 milkings) after the latest treatment must not be used for food.	Treatment of severe infestations of gastrointestinal roundworms (genera *Trichostrongylus spp., Haemonchus spp., Ostertagia spp.*); treatment of infestations of *Cooperia* species.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and final dosage form, and any feed additive premix, feed additive concentrate, feed additive supplement, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities of each contained therein.

(3) Adequate directions and warnings for use.

§ 121.261 Petrolatum.

Petrolatum may be safely used in or on animal feed, subject to the following prescribed conditions:

(a) Petrolatum complies with the specifications set forth in the U.S. Pharmacopeia XVI for white petrolatum or in The National Formulary XII for yellow petrolatum.

(b) Petrolatum meets the following ultraviolet absorbance limits when subjected to the analytical procedure described in § 121.1156(b).

Ultraviolet absorbance per centimeter path length:

Millimicrons:	*Maximum*
280–289	0.25
290–299	.20
300–359	.14
360–400	.04

(c) It is used in animal feed for the following purposes:

(1) To reduce dustiness of feeds or mineral supplements.

(2) To serve as a lubricant in the preparation of pellets, cubes, or blocks, and to improve resistance to moisture of such pellets, cubes, or blocks.

(d) The quantity of petrolatum present in animal feeds from the uses specified in paragraph (c) of this section shall not exceed 3 percent in mineral supplements nor shall it exceed 0.06 percent of the total ration when present in feed or feed concentrates.

(e) When used in combination with technical white mineral oil for the uses described in paragraph (c) of this section, the total quantity of combined petrolatum and technical white mineral oil shall not exceed the limits prescribed in paragraph (d) of this section.

(f) Petrolatum may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the act, in an amount not greater than that required to produce its intended effect.

§ 121.262 3-Nitro-4-hydroxyphenylarsonic acid.

3-Nitro-4-hydroxyphenylarsonic acid may be safely used in animal feed when incorporated therein in accordance with the following conditions:

(a) The additive is the chemical 4-hydroxy-3-nitrobenzene arsonic acid, $C_6H_6AsNO_6$, conforming to the following specifications, on a dry basis:

(1) The additive contains not less than 28 percent and not more than 28.7 percent arsenic, equivalent to not less than 98.3 percent and not more than 100.8 percent of $C_6H_6AsNO_6$.

(2) The additive contains not more than 0.025 percent arsenic as inorganic arsenite, calculated as As_2O_3, and not more than 0.05 percent arsenic as inorganic arsenate, calculated as $AsO_4^{\equiv}$.

(b) Permitted uses of 3-nitro-4-hydroxyphenylarsonic acid alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone, or with an additional ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use for both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredients and secondary ingredients are individually listed. Unless specifically provided for by the regulation, principal ingredients may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient or ingredients of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the title of this section, and is not intended to imply that the ingredient is of greater value than any other additives named in this section.

(c) It is used or intended for use in feed as follows:

TABLE 1—3-NITRO-4-HYDROXYPHENYLARSONIC ACID IN COMPLETE CHICKEN AND TURKEY FEED

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)			For chickens; withdraw 5 days before slaughter; as sole source of organic arsenic.	Growth promotion and feed efficiency; improving pigmentation.
1.2 3-Nitro-4-hydroxyphenylarsonic acid.	45.4 (0.005%)	3,5-Dinitrobenzamide. + Acetyl-(p-nitrophenyl)-sulfanilamide.	227 (0.025%) 272 (0.03%)	For chickens; not to be fed to laying chickens; withdraw 5 days before slaughter; from feed additive premixes containing not more than 25 percent 3,5-dinitrobenzamide, 30 percent acetyl-(p-nitrophenyl)-sulfanilamide, and 5 percent 3-nitro-4-hydroxyphenylarsonic acid; as sole source of organic arsenic.	Prevention of coccidiosis caused by *E. tenella*, *E. necatrix*, and *E. acervulina*; growth promotion and feed efficiency; improving pigmentation.
1.3 3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)	Zoalene	113.5 (0.0125%)	For broiler chickens; withdraw 5 days before slaughter; as sole source of organic arsenic.	Prevention and control of coccidiosis; growth promotion and feed efficiency; improving pigmentation.
1.4 3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)	do	36.3–113.5 (0.004%–0.0125%)	For replacement chickens; in complete feed only; grower ration not to be fed to birds under 5½ weeks of age nor over 14 weeks of age; withdraw 5 days before slaughter; as sole source of organic arsenic; as follows:	Development of active immunity to coccidiosis; growth promotion and feed efficiency; improving pigmentation.

Growing Conditions	Starter ration	Grower ration
	Grams per ton	*Grams per ton*
Severe exposure	113.5 (0.0125%)	75.4–113.5 (0.0083%–0.0125%)
Light to moderate exposure	75.4–113.5 (0.0083%–0.0125%)	36.3–75.4 (0.004%–0.0085%)

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
a. 1.1, 1.3, 1.4	22.7–45.4	Penicillin	2.4–50	As procaine penicillin.	Growth promotion and feed efficiency.
b. 1.1	22.7–45.4	do	50–100	§ 121.256, table 1, item 3.1.	§ 121.256, table 1, item 3.1.
c. 1.1	22.7–45.4	Penicillin+streptomycin.	14.4–50	As procaine penicillin and streptomycin sulfate.	Growth promotion and feed efficiency.
d. 1.1	22.7–45.4	Chlortetracycline.	10–50	As chlortetracycline hydrochloride.	Do.
e. 1.1	22.7–45.4	do	50–200	§ 121.208, table 1, items 2, 6.	§ 121.208, table 1, items 2, 6.
f. 1.1, 1.3, 1.4	22.7–45.4	Penicillin+bacitracin.	3.6–50	As procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Growth promotion and feed efficiency.
g. 1.1	22.7–45.4	do	50–100	§ 121.232, table 1, items 2.2, 5.2; § 121.233, table 1, items 2.2, 5.2; § 121.252, table 1, items 2.2, 5.2.	§ 121.232, table 1, items 2.2, 5.2; § 121.233, table 1, items 2.2, 5.2; § 121.252, table 1, items 2.2, 5.2.
1.4 3-Nitro-4-hydroxyphenylarsonic acid—Continued					
h. 1.1	22.7–45.4	Bacitracin	50–100	§ 121.232, table 1, items 2.1, 5.1; § 121.233, table 1, items 2.1, 5.1; § 121.252, table 1, items 2.1, 5.1.	§ 121.232, table 1, items 2.1, 5.1; § 121.233, table 1, items 2.1, 5.1; § 121.252, table 1, items 2.1, 5.1.
i. 1.1, 1.3, 1.4	22.7–45.4	do	4–50	As bacitracin, bacitracin methylene disalicylate, zinc bacitracin, or manganese bacitracin.	Growth promotion and feed efficiency.
j. 1.1	22.7–45.4	Oxytetracycline	50–200	§ 121.251, table 1, item 6.	§ 121.251, table 1, item 6.
k. 1.1	22.7–45.4	Amprolium	36.3–227	§ 121.210, table 1, items 2.1, 3.1.	§ 121.210, table 1, items 2.1, 3.1
2.1 3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)			For turkeys; withdraw 5 days before slaughter; as sole source of organic arsenic.	Growth promotion and feed efficiency; improving pigmentation.
2.2 3-Nitro-4-hydroxyphenylarsonic acid.	22.7–45.4 (0.0025%–0.005%)	Zoalene	113.5–170.3 (0.0125%–0.019%)	For turkeys grown for meat purposes only; withdraw 5 days before slaughter; as sole source of organic arsenic.	Growth promotion and feed efficiency; improving pigmentation; prevention and control of coccidiosis.
a. 2.1	22.7–45.4	Penicillin	2.4–50	As procaine penicillin.	Growth promotion and feed efficiency.
b. 2.1	22.7–45.4	do	50–100	§ 121.256, table 1, item 4.1.	§ 121.256, table 1, item 4.1.
c. 2.1	22.7–45.4	Penicillin+streptomycin.	14.4–50	As procaine penicillin and streptomycin sulfate.	Growth promotion and feed efficiency.
d. 2.1	22.7–45.4	Chlortetracycline.	10–50	As chlortetracycline hydrochloride.	Do.
e. 2.1	22.7–45.4	do	50–200	§ 121.208, table 1, items 3, 7.	§ 121.208, table 1, items 3, 7.
f. 2.1	22.7–45.4	Penicillin+bacitracin.	3.6–50	Not less than 0.6 gm. of penicillin nor less than 3.0 gm. of bacitracin; as procaine penicillin plus bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Growth promotion and feed efficiency.
g. 2.1	22.7–45.4	do	50–100	§ 121.256, table 1, item 4.2.	§ 121.256, table 1, item 4.2.
h. 2.1	22.7–45.4	Bacitracin	4–50	As bacitracin, bacitracin methylene disalicylate, manganese bacitracin, or zinc bacitracin.	Growth promotion and feed efficiency.
i. 2.1	22.7–45.4	do	50–100	§ 121.232, table 1, item 3.1; § 121.233, table 1, item 3.1; § 121.252, table 1, item 3.1.	§ 121.232, table 1, item 3.1; § 121.233, table 1, item 3.1; § 121.252, table 1, item 3.1.
j. 2.1	22.7–45.4	Oxytetracycline	50–100	§ 121.251, table 1, item 3.	§ 121.251, table 1, item 3.
k. 2.1	22.7–45.4	Amprolium	113.5–227	§ 121.210, table 1, item 1.1.	§ 121.210, table 1, item 1.1.

(d) To assure safe use, the label and labeling of the additives, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

§ 121.263 3,5-Dinitrobenzamide.

3,5-Dinitrobenzamide may be safely used in the treatment of chickens in accordance with the following prescribed conditions:

(a) The additive is the chemical 3,5-dinitrobenzamide ($C_7H_5N_3O_5$) conforming to the specifications prescribed in this paragraph:

(1) Melting-point range: 180° C. to 184° C.

(2) Assay (by total nitrogen determination): 95 to 100 percent.

(3) Glycol-mono-3,5-dinitrobenzoate: 0 to 5 percent.

(4) Molecular weight: 211.13.

(5) Moisture content: 0–2 percent.

(6) An intense purple color is developed when 25 milligrams of the compound is dissolved in a solution of 5 milliliters of dimethyl sulfoxide plus 1 milliliter of diethylamine.

(b) The additive is used or intended for use as prescribed in the following table (the term "principal ingredient" as used in this table refers to the additive named in the heading of this section):

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 [Reserved]					
2.1 3,5-Dinitrobenzamide.	227 (0.025%)	Acetyl (p-nitrophenyl)sulfanilamide.	272 (0.03%)	For chickens, not to be fed to laying chickens; withdraw 5 days before slaughter; from feed additive premixes containing not more than 25% 3,5-dinitrobenzamide and 30% acetyl(p-nitrophenyl) sulfanilamide.	As an aid in the prevention of coccidiosis caused by *E. tenella*, *E. necatrix* and *E. acervulina*.
2.2 3,5-Dinitrobenzamide.	227 (0.025%)	Acetyl(p-nitrophenyl) sulfanilamide. + 3-Nitro-4-hydroxyphenylarsonic acid.	272 (0.03%) 45.4 (0.005%)	For chickens; not to be fed to laying chickens; withdraw 5 days before slaughter; from feed additive premixes containing not more than 25% 3,5-dinitrobenzamide, 30% acetyl(p-nitrophenyl)-sulfanilamide, and 5% 3-nitro-4-hydroxyphenylarsonic acid; as sole source of organic arsenic.	Prevention of coccidiosis caused by *E. tenella*, *E. necatrix*, and *E. acervulina*; growth promotion and feed efficiency; improving pigmentation.

(c) To assure safe use, the label and labeling of the additive or additives, any combination of additives, and any feed additive premix, feed additive concentrate, feed additive supplement, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.264 Acetyl(p-nitrophenyl)sulfanilamide.

Acetyl(p-nitrophenyl)sulfanilamide may be safely used in the treatment of chickens in accordance with the following prescribed conditions:

(a) The additive is the chemical acetyl-(p-nitrophenyl)sulfanilamide ($C_{14}H_{13}N_3O_5S$) conforming to the specifications prescribed in this paragraph:

(1) Melting-point range: 260° C. to 261° C.

(2) Assay (by sodium nitrite titration): 97 to 100.5 percent.

(3) Moisture (method No. 5.96, "Official Methods of Analysis of the Association of Official Agricultural Chemists," 8th edition, 1955, page 64): 0 to 2 percent.

(4) Molecular weight: 335.34.

(5) Soluble in 0.1*N* sodium hydroxide, reprecipitating unchanged on acidification.

(b) The additive is used or intended for use as prescribed in the following table (the term "principal ingredient" as used in this table refers to the additive named in the heading of this section):

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1.1 (Reserved)					
1.2 Acetyl(p-nitrophenyl)sulfanilamide.	272 (0.03%)	3,5-Dinitrobenzamide.	227 (0.025%)	For chickens; not to be fed to laying chickens; withdraw 5 days before slaughter; from feed additive premixes containing not more than 25% 3,5-dinitrobenzamide and 30% acetyl(p-nitrophenyl)sulfanilamide.	As an aid in the prevention of coccidiosis caused by *E. tenella*, *E. necatrix*, and *E. acervulina*.
1.3 Acetyl(p-nitrophenyl)sulfanilamide.	181.6 (0.02%)	2-Chloro-4-nitrobenzamide.	227 (0.025%)	For chickens; not to be fed to laying chickens; withdraw 4 days before slaughter; from feed additive premixes containing not more than 20 percent acetyl(p-nitrophenyl)sulfanilamide and 25 percent 2-chloro-4-nitrobenzamide.	As an aid in the prevention of coccidiosis caused by *E. tenella*, *E. necatrix*, and *E. acervulina*.
1.4 Acetyl(p-nitrophenyl)sulfanilamide.	272 (0.03%)	3,5-Dinitrobenzamide. + 3-Nitro-4-hydroxyphenylarsonic acid.	227 (0.025%) 45.4 (0.005%)	For chickens; not to be fed to laying chickens; withdraw 5 days before slaughter; from feed additive premixes containing not more than 25% 3,5-dinitrobenzamide, 30% acetyl(p-nitrophenyl)-sulfanilamide and 5% 3-nitro-4-hydroxyphenylarsonic acid; as sole source of organic arsenic.	Prevention of coccidiosis caused by *E. tenella*, *E. necatrix*, and *E. acervulina*; growth promotion and feed efficiency; improving pigmentation.

(c) To assure safe use, the label and the labeling of the additive or additives, any combination of additives, and any feed additive premix, feed additive concentrate, feed additive supplement, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.265 Diammonium phosphate.

The food additive diammonium phosphate may be safely used in ruminant feed in accordance with the following prescribed conditions:

(a) The food additive is the product resulting from the neutralization of feeding-phosphoric-acid or defluorinated wet-process phosphoric acid with anhydrous ammonia. It contains not less than 106.25 percent equivalent crude protein (nitrogen X 6.25) and 20 percent phosphorus. It contains not more than the following:

1 part fluorine to 100 parts phosphorus.
75 parts per million of arsenic (as As).
30 parts per million of heavy metals, as lead (Pb).

(b) It is used in ruminant feeds as a source of phosphorus and nitrogen in an amount that supplies not more than 2 percent of equivalent crude protein in the total daily ration.

(c) To assure safe use of the additive, the label and labeling of the additive and that of any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall contain, in addition to other information required by the act, the following:

(1) The name of the additive.

(2) The maximum percentage of equivalent crude protein from the nonprotein nitrogen.

(3) If the feed additive premix, feed additive concentrate, or feed additive supplement contains more than 2 percent equivalent crude protein from diammonium phosphate, adequate directions for use and a prominent statement, "Warning—This feed should be used only in accordance with directions furnished on the label."

§ 121.266 Dienestrol diacetate.

Dienestrol diacetate may be safely used in animals in accordance with the following prescribed conditions:

(a) The additive is the chemical 3,4-bis(p-acetoxyphenyl)2,4-hexadiene having a melting point range of 118°–122° C.

(b) Permitted uses of dienestrol diacetate alone and with certain other additives are described in tabular form in this section, and these tables are to be read as follows:

(1) The numbered line items establish the required limitations and indications for use of the principal ingredient as the medicament alone or with an additional ingredient added.

(2) The lettered line items establish the required limitations and indications for use of secondary ingredients that may be added to the indicated principal ingredient. Where principal and secondary ingredients have been mixed, the applicable limitations and indications for use from both the numbered items and lettered items apply. If duplicate limitations occur, these may be appropriately combined.

(3) Permitted combinations of principal ingredient and secondary ingredients are individually listed. Unless specifically provided by the regulations, the principal ingredient may not be mixed with two or more secondary ingredients.

(4) Where cross-references specify a particular table and item number of another section, use of only the principal ingredient of the numbered item is authorized thereby.

(5) The term "principal ingredient" as used in this section refers to the additive named in the heading of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(c) It is used or intended for use in feeds, as follows:

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
1. Dienestrol diacetate.	20.9 (0.0023%)	----------	----------	For broiler chickens; withdraw 48 hours before slaughter; start treatment at 5 or 6 weeks of age; treat 4 to 6 weeks.	Promote the distribution of fat for tenderness and bloom.
2. Dienestrol diacetate.	20.9 (0.0023%)	----------	----------	For roaster chickens; withdraw 48 hours before slaughter; start treatment 5 or 6 weeks of age; treat 6 to 10 weeks.	Do.
3. Dienestrol diacetate.	31.8 (0.0035%)	----------	----------	For roaster chickens; withdraw 48 hours before slaughter; start treatment at 8 or 9 weeks of age; treat 5 to 7 weeks.	Do.
4. Dienestrol diacetate.	63.6 (0.007%)	----------	----------	For broiler chickens; withdraw 48 hours before slaughter; start treatment at 3 weeks of age; treat for 3 weeks.	Do.
5. Dienestrol diacetate.	63.6 (0.007%)	----------	----------	For turkey broilers; withdraw 48 hours before slaughter; start treatment at 8 to 10 weeks of age; treat for 3 weeks.	Do.

(d) To assure safe use, the label and labeling of the additive, any combination of additives, and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity or quantities contained therein.

(3) Adequate directions and warnings for use.

(e) Tolerance limitations on residues of dienestrol diacetate in edible products from treated animals are established under § 121.1173.

§ 121.267 Griseofulvin.

The food additive griseofulvin may be safely used in animal feed when incorporated therein in accordance with the following prescribed conditions:

(a) Griseofulvin is the antibiotic substance produced by growth of *Penicillium patulum* or *Pencillium griseofulvum* or the same substance produced by any other means.

(b) The quantity of antibiotic authorized in this section is expressed in terms of the activity of the master standard.

(c) It is used or intended for use in complete chinchilla feed at a level of 160 milligrams per pound (0.0353 percent) for the prevention, treatment, and control of fungal infections caused by *Trichophyton* and as an aid in the prevention of fur chewing associated with these fungal infections.

(d) To assure safe use, the label and labeling of the additive and any feed additive supplement, feed additive concentrate, feed additive premix, or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive.

(2) A statement of the quantity of the additive contained therein.

(3) Adequate directions and warnings for use, including the statement that such feeds are to be administered as sole ration.

§ 121.268 Dihydrostreptomycin sulfate.

Dihydrostreptomycin sulfate may be safely used in accordance with the following prescribed conditions:

(a) Dihydrostreptomycin sulfate is the sulfate salt of the antibiotic substance obtained by hydrogenation of the antibiotic substance produced by the growth of *Streptomyces griseus* or the same antibiotic substance produced by any other means.

(b) The antibiotic activity authorized by this section is expressed in terms of the weight of the appropriate standard.

(c) The term "principal ingredient" as used in this section refers to the additive named in the title of this section and is not intended to imply that the ingredient is of a greater value than any other additives named in this section.

(d) The additive is used or intended for use as follows:

Principal ingredient	Amount	Combined with—	Amount	Limitations	Indications for use
Dihydrostreptomycin.	150 mg....	Chlorhexidine dihydrochloride.	1,500 mg........	In tablets or suspension for oral administration to calves; total daily dose per 100 lbs. body weight for 3 days; withdraw 3 days before slaughter; as dihydrostreptomycin sulfate.	Treatment of bacterial scours in calves.

(e) To assure safe use, the label and labeling of the additive or additives and any finished dosage form shall bear in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.269 2-Chloro-4-nitrobenzamide.

2-Chloro-4-nitrobenzamide may be safely used in the treatment of animals in accordance with the following prescribed conditions:

(a) The additive is the chemical 2-chloro-4-nitrobenzamide ($C_7H_5O_3N_2Cl$):

(1) Minimum melting point 170° C.

(2) Moisture content not to exceed 1.0 percent.

(3) Purity not less than 98 percent on an anhydrous basis.

(b) The additive is used or intended for use as prescribed in the following table (the term "principal ingredient" as used in the table refers to the additive named in the heading of this section):

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
2-Chloro-4-nitrobenzamide.	227 (0.025%)	Acetyl(p-nitrophenyl)sulfanilamide.	181.6 (0.02%)	For chickens; not to be fed to laying chickens; withdraw 4 days before slaughter; from feed additive premixes containing not more than 25 percent 2-chloro-4-nitrobenzamide and 20 percent acetyl(p-nitrophenyl)-sulfanilamide.	As an aid in the prevention of coccidiosis caused by *E. tenella*, *E. necatrix* or *E. acervulina*.

(c) To assure safe use, the label and labeling of the additive or additives, any combination of additives, and any feed additive premix, feed additive concentrate, feed additive supplement or complete feed prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive or additives.

(2) A statement of the quantity of the additive or additives contained therein.

(3) Adequate directions and warnings for use.

§ 121.270 Inorganic bromides.

A tolerance of 90 parts per million is established for residues of inorganic bromide (calculated as Br) in or on dehydrated citrus pulp for cattle feed resulting from carryover and concentration of residues in this feed item, when present therein as a result of soil treatment with the nematocide 1,2-dibromo-3-chloropropane in the production of citrus fruits.

§ 121.271 Disodium EDTA.

The food additive disodium EDTA (disodium ethylenediaminetetraacetate) may be safely used in ruminant feeds, in accordance with the following prescribed conditions:

(a) The food additive contains a minimum of 99 percent disodium ethylenediaminetetraacetate dihydrate ($C_{10}H_{14}O_8N_2Na_2 \cdot 2H_2O$).

(b) It is used to solubilize trace minerals in aqueous solutions, which are then added to ruminant feeds.

(c) It is used or intended for use in an amount not to exceed 240 parts per million of the additive in finished feed.

(d) To assure safe use of the additive the label and labeling shall bear:

(1) The name of the additive; and

(2) Adequate mixing directions to insure that the chelated trace-mineral mix is uniformly blended throughout the feed.

§ 121.272 Sorbitan monostearate.

The food additive sorbitan monostearate may be safely used alone or in combination with polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) as an emulsifier in mineral premixes and dietary supplements for animal feeds.

§ 121.273 Pyrophyllite.

Pyrophyllite (aluminum silicate monohydrate) may be safely used as the sole anticaking aid, blending agent, pelleting aid, or carrier in animal feed when incorporated therein in an amount not to exceed 2 percent in complete animal feed.

§ 121.274 Carbophenothion.

A tolerance of 10 parts per million is established for residues of the insecticide carbophenothion (*S*-(*p*-chlorophenylthiomethyl) *O,O*-diethyl phosphorodithioate) in or on dehydrated citrus pulp and citrus meal for cattle feed when present therein as a result of the application of this insecticide in the production of grapefruit, lemons, limes, oranges, tangelos, and tangerines.

§ 121.275 Hemicellulose extract.

Hemicellulose extract may be safely used in animal feed when incorporated therein in accordance with the following conditions:

(a) The additive is produced from the aqueous extract obtained by the treatment of wood with water at elevated temperatures (420°–535° F.) and pressure (300–900 pounds per square inch) and contains primarily pentose and hexose sugars.

(b) The additive may be used either wet or dry, with the wet product having a degrees Brix of not less than 65.

(c) The additive is used as a source of metabolizable energy in animal feed in accordance with good manufacturing and feeding practices at levels not to exceed 10 percent of the total diet.

(d) To assure safe use, the label and labeling of the additive shall bear:

(1) The name of the additive.

(2) Adequate directions for use, including suggested feeding levels for various species.

Subpart D—Food Additives Permitted in Food for Human Consumption

AUTHORITY: The provisions of this Subpart D issued under sec. 409, 72 Stat. 1785; 21 U.S.C. 348.

§ 121.1000 General provisions applicable to this subpart.

(a) Regulations prescribing conditions under which food additive substances may be safely used predicate usage under conditions of good manufacturing practice. For the purposes of this subpart, good manufacturing practice shall be defined to include the following restrictions.

(1) The quantity of the substance added to food does not exceed the amount reasonably required to accomplish its intended physical, nutritive, or other technical effect in food.

(2) Any substance intended for use in or on food is of appropriate food grade and is prepared and handled as a food ingredient.

(b) The existence of a regulation prescribing safe conditions of use for a food additive shall not be construed to relieve the use of the substance from compliance with any other provision of the act.

(c) The existence of any regulation prescribing safe conditions of use for a nutrient substance does not constitute a finding that the substance is useful or required as a supplement to the diet of humans.

§ 121.1001 Ethoxyquin.

(a) Ethoxyquin (1,2-dihydro-6-ethoxy-2,2,4-trimethylquinoline) may be safely used as an antioxidant for preservation of color in the production of chili powder, paprika, and ground chili at levels not in excess of 100 parts per million.

(b) In order to provide for the safe use of the additive in feed prepared in accordance with §§ 121.201 and 121.202, tolerances are established for residues of ethoxyquin in or on edible products of animals as follows:

5 parts per million in or on the uncooked fat of meat from animals except poultry.

3 parts per million in or on the uncooked liver and fat of poultry.

0.5 part per million in or on the uncooked muscle meat of animals.

0.5 part per million in poultry eggs.

Zero in milk.

§ 121.1002 [Reserved]

§ 121.1003 Neomycin, polymyxin, hydrocortisone acetate, hydrocortisone sodium succinate in milk from dairy cows.

A tolerance of zero is established for neomycin, polymyxin, and added hydrocortisone acetate and hydrocortisone sodium succinate in milk from dairy cows or in any processed food because of the use therein of such milk.

§ 121.1004 Glyceryl-lacto esters of fatty acids.

Glyceryl-lacto esters of fatty acids (the lactic acid esters of mono- and diglycerides) may be safely used in food in accordance with the following prescribed conditions:

(a) They are manufactured from glycerin, lactic acid, and fatty acids conforming with § 121.1070 and/or edible fats and oils.

(b) They are used in amounts not in excess of those reasonably required to accomplish their intended physical or technical effect as emulsifiers and plasticizers in food.

§ 121.1005 Bacitracin, zinc bacitracin, manganese bacitracin, bacitracin methylene disalicylate.

A tolerance of zero is established for residues of the food additives bacitracin, bacitracin methylene disalicylate, manganese bacitracin, and zinc bacitracin in eggs of poultry, in milk, and in the uncooked edible tissues and byproducts of cattle, swine, pheasants, quail, and poultry.

§ 121.1006 Maleic hydrazide.

A food additive known as maleic hydrazide (1,2-dihydro-3,6-pyridazinedione) may be present in potato chips when used in accordance with the following conditions:

(a) The food additive is present as a result of the application of a pesticide formulation containing maleic hydrazide to the growing potato plant in accordance with directions registered by the United States Department of Agriculture.

(b) The label of the pesticide formulation containing the food additive conforms to labeling registered by the United States Department of Agriculture.

(c) The food additive is present in an amount not to exceed 160 parts per million by weight of the finished food.

§ 121.1007 Reserpine.

A tolerance of zero is established for residues of the food additive reserpine and its metabolites in or on the uncooked meat, meat products, and eggs of chickens and turkeys.

§ 121.1008 Polyoxyethylene (20) sorbitan tristearate.

The food additive polyoxyethylene (20) sorbitan tristearate, which is a mixture of polyoxyethylene ethers of mixed stearic acid esters of sorbitol anhydrides and related compounds, may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is manufactured by reacting stearic acid (usually containing associated fatty acids, chiefly palmitic) with sorbitol to yield a product with a maximum acid number of 15 and a maximum water content of 0.2 percent, which is then reacted with ethylene oxide.

(b) The food additive meets the following specifications:

Saponification number 88–98.
Acid number 0–2.
Hydroxyl number 44–60.
Oxyethylene content 46 percent–50 percent.

(c) The additive is used, or intended for use, as follows:

(1) As an emulsifier in ice cream, frozen custard, ice milk, fruit sherbet, and nonstandardized frozen desserts, when used alone or in combination with polysorbate 80, whereby the maximum amount of the additives, alone or in combination, does not exceed 0.1 percent of the finished frozen dessert.

(2) As an emulsifier in cakes and cake mixes, with or without one or a combination of the following:

(i) Sorbitan monostearate.

(ii) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

When used alone, the maximum amount of polyoxyethylene (20) sorbitan tristearate shall not exceed 0.32 percent of the cake or cake mix, on a dry-weight basis. When used with sorbitan monostearate and/or polysorbate 60 (polyoxyethylene (20) sorbitan monostearate), it shall not exceed 0.32 percent, nor shall the sorbitan monostearate exceed 0.61 percent or the polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) exceed 0.46 percent, and no combination of these emulsifiers shall exceed 0.66 percent of the cake or cake mix, all calculated on a dry-weight basis.

(3) As an emulsifier in whipped vegetable oil topping with or without one or a combination of the following:

(i) Sorbitan monostearate;

(ii) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate);

whereby the maximum amount of the additive or additives used does not exceed 0.4 percent of the weight of the finished whipped vegetable oil topping.

(4) As an emulsifier in solid-state, edible vegetable fat-water emulsions intended for use as substitutes for milk or cream in beverage coffee, with or without one or a combination of the following:

(i) Sorbitan monostearate.

(ii) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

The maximum amount of the additive or additives shall not exceed 0.4 percent by weight of the finished edible vegetable fat-water emulsion.

(5) As an emulsifier in cake icings and cake fillings, with or without one or a combination of the following:

(i) Sorbitan monostearate.

(ii) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

When used alone, the maximum amount of polyoxyethylene (20) sorbitan tristearate shall not exceed 0.32 percent of the weight of the cake icing or cake filling. When used with sorbitan monostearate and/or polysorbate 60 (polyoxyethylene (20) sorbitan monostearate), it shall not exceed 0.32 percent, nor shall the sorbitan monostearate exceed 0.7 percent, the polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) exceed 0.46 percent, and no combination of these emulsifiers shall exceed 1 percent of the weight of the cake icing or cake filling.

(d) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive and any intermediate premixes shall bear:

(i) The name of the additive.

(ii) A statement of the concentration or strength of the additive in any intermediate premixes.

(2) The label or labeling shall bear adequate directions to provide a final product that complies with the limitations prescribed in paragraph (c) of this section.

§ 121.1009 Polysorbate 80.

The food additive polysorbate 80 (polyoxyethylene (20) sorbitan monooleate), which is a mixture of polyoxyethylene ethers of mixed partial oleic acid esters of sorbitol anhydrides and related compounds, may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is manufactured by reacting oleic acid (usually containing associated fatty acids) with sorbitol to yield a product with a maximum acid number of 7.5 and a maximum water content of 0.5 percent, which is then reacted with ethylene oxide.

(b) The food additive meets the following specifications:

Saponification number 45–55.
Acid number 0–2.
Hydroxyl number 65–80.
Oxyethylene content 65 percent–69.5 percent.

(c) The additive is used or intended for use as follows:

(1) An emulsifier in ice cream, frozen custard, ice milk, fruit sherbet, and nonstandardized frozen desserts, when used alone or in combination with polyoxyethylene (20) sorbitan tristearate, whereby the maximum amount of the additives, alone or in combination, does not exceed 0.1 percent of the finished frozen dessert.

(2) In yeast-defoamer formulations, whereby the maximum amount of the additive does not exceed 4 percent of the finished yeast defoamer and the maximum amount of the additive in the yeast from such use does not exceed 4 parts per million.

(3) As a solubilizing and dispersing agent in pickles and pickle products, whereby the maximum amount of the additive does not exceed 500 parts per million.

(4) As a solubilizing and dispersing agent for fat-soluble vitamins in vitamin and vitamin-mineral preparations, whereby the maximum intake of additive from the recommended daily dose of vitamins does not exceed 300 milligrams; except that in vitamin A preparations containing more than 30,000 units per dose, the maximum intake of the additive shall not exceed 500 milligrams per day.

(5) As a surfactant in the production of coarse crystal sodium chloride whereby the maximum amount of the additive in the finished sodium chloride does not exceed 10 parts per million.

(6) In special dietary foods, as an emulsifier for edible fats and oils, with directions for use which provide for the ingestion of not more than 360 milligrams of polysorbate 80 per day.

(7) As a solubilizing and dispersing agent for dill oil in canned spiced green beans, not to exceed 30 parts per million.

(8) As an emulsifier, alone or in combination with polysorbate 60, in shortenings and edible oils intended for use in nonstandardized baked goods, baking mixes, icings, fillings, and toppings and in the frying of foods, as follows:

(i) It is used alone in an amount not to exceed 1 percent of the weight of the finished shortening or oil.

(ii) It is used with polysorbate 60 in any combination providing no more than 1 percent of polysorbate 80 and no more than 1 percent of polysorbate 60, provided that the total combination does not exceed 1 percent of the finished shortening or oil.

(d) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive and any intermediate premixes shall bear:

(i) The name of the additive.

(ii) A statement of the concentration or strength of the additive in any intermediate premixes.

(2) The label or labeling shall bear adequate directions to provide a final product that complies with the limitations prescribed in paragraph (c) of this section.

§ 121.1010 Gibberellic acid and its potassium salt.

The food additives gibberellic acid and its potassium salt may be used in the malting of barley in accordance with the following prescribed conditions:

(a) The additives meet the following specifications:

(1) The gibberellic acid is produced by deep-culture fermentation of a suitable nutrient medium by a strain of Fusarium moniliforme or a selection of this culture.

(2) The gibberellic acid produced is of 80 percent purity or better.

(3) The empirical formula of gibberellic acid is represented by $C_{19}H_{22}O_6$.

(4) Potassium gibberellate is the potassium salt of the specified gibberellic acid.

(5) The potassium gibberellate is of 80 percent purity or better.

(6) The gibberellic acid or potassium gibberellate may be diluted with substances generally recognized as safe in foods or with salts of fatty acids conforming to § 121.1071.

(b) They are used or intended for use in the malting of barley under conditions whereby the amount of either or both additives present in the malt is not in excess of 2 parts per million expressed as gibberellic acid, and the treated malt is to be used in the production of fermented malt beverages or distilled spirits only, whereby the finished distilled spirits contain none and the finished malt beverage contains not more than 0.5 part per million of gibberellic acid.

(c) To insure the safe use of the food additives the label of the package shall bear, in addition to the other information required by the act:

(1) The name of the additive, "gibberellic acid" or "potassium gibberellate," whichever is appropriate.

(2) An accurate statement of the concentration of the additive contained in the package.

(3) Adequate use directions to provide not more than 2 parts per million of gibberellic acid in the finished malt.

(4) Adequate labeling directions to provide that the final malt is properly labeled as described in paragraph (d) of this section.

(d) To insure the safe use of the additive the label of the treated malt shall bear, in addition to the other information required by the act, the statements:

(1) "Contains not more than 2 parts per million __________," the blank being filled in with the words "gibberellic acid" or "potassium gibberellate," whichever is appropriate; and

(2) "Brewer's malt—To be used in the production of fermented malt beverages only" or "Distiller's malt—To be used in the production of distilled spirits only," whichever is appropriate.

§ 121.1011 Oleandomycin.

A tolerance of zero is established for residues of the food additive oleandomycin in or on the uncooked edible tissues or byproducts of chickens, turkeys, and swine that have consumed the antibiotic in feed.

§ 121.1012 Sodium lauryl sulfate.

The food additive sodium lauryl sulfate may be safely used in food in accordance with the following conditions:

(a) The additive meets the following specifications:

(1) It is a mixture of sodium alkyl sulfates consisting chiefly of sodium lauryl sulfate $[CH_3(CH_2)_{10}CH_2OSO_3Na]$.

(2) It has a minimum content of 90 percent sodium alkyl sulfates.

(b) It is used or intended for use:

(1) As an emulsifier in or with egg whites whereby the additive does not exceed the following limits:

Egg white solids, 1,000 parts per million.
Frozen egg whites, 125 parts per million.
Liquid egg whites, 125 parts per million.

(2) As a whipping agent at a level not to exceed 0.5 percent by weight of gelatine used in the preparation of marshmallows.

(c) To insure the safe use of the additive, the label of the food additive container shall bear, in addition to the other information required by the act:

(1) The name of the additive, sodium lauryl sulfate.

(2) Adequate use directions to provide a final product that complies with the limitations prescribed in paragraph (b) of this section.

§ 121.1013 Zoalene.

Tolerances are established for residues of zoalene (3,5-dinitro-*o*-toluamide) and its metabolite 3-amino-5-nitro-*o*-toluamide in food, as follows:

(a) In edible tissues of chickens:

(1) Six parts per million in uncooked liver and kidneys.

(2) Three parts per million in uncooked muscle meat.

(3) Two parts per million in uncooked fat.

(b) In edible tissues of turkeys: 3 parts per million in uncooked muscle meat and liver.

§ 121.1014 Chlortetracycline.

Tolerances are established for residues of chlortetracycline in food as follows:

(a) In edible tissues of chickens and turkeys fed on chlortetracycline-medicated feeds, as follows:

(1) 4 parts per million in uncooked kidneys.

(2) 1 part per million in uncooked muscle, liver, fat, and skin.

Residues established in subparagraphs (1) and (2) of this paragraph may be in addition to residues of chlortetracycline in chicken tissues provided for in § 120.117 of this chapter.

(3) Zero in eggs.

(b) In edible tissues of swine as follows:

(1) 4 parts per million in uncooked kidneys.

(2) 2 parts per million in uncooked liver.

(3) 1 part per million in uncooked muscle.

(4) 0.2 part per million in uncooked fat.

(c) In edible tissues from calves treated in accordance with § 121.208(d), table 5.

(1) 4 parts per million in uncooked liver and kidney.

(2) 1 part per million in uncooked muscle and fat.

(d) In edible tissues from beef cattle and nonlactating dairy cows treated in accordance with § 121.208(d), table 6, and § 121.241(b), table 1.

(1) 0.1 part per million in uncooked kidney, liver, and muscle.

(2) Zero in uncooked fat.

(e) Zero in milk.

§ 121.1015 Propylene glycol alginate.

The food additive propylene glycol alginate may be used as an emulsifier, stabilizer, or thickener in foods in accordance with the following prescribed conditions:

(a) The additive is the ester of alginic acid and propylene glycol, containing up to 85 percent of the carboxylic acid groups esterified with the remaining groups either free or neutralized.

(b) It is used or intended for use as a stabilizer in ice cream, frozen custard, ice milk, fruit sherbet, and water ices at not to exceed 0.5 percent of the weight of the finished product, and is used or intended for use, in accordance with good manufacturing practice, as an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(c) To insure safe use of the additive, the label of the food additive container shall bear, in addition to the other information required by the act:

(1) The name of the additive, "propylene glycol alginate" or "propylene glycol ester of alginic acid."

(2) Adequate directions for use.

§ 121.1016 Oxystearin.

The food additive oxystearin may be safely used in foods, when such use is not precluded by standards of identity, in accordance with the following conditions.

(a) The additive is a mixture of the glycerides of partially oxidized stearic and other fatty acids obtained by heating hydrogenated cottonseed or soybean oil under controlled conditions, in the presence of air and a suitable catalyst which is not a food additive as so defined. The resultant product meets the following specifications:

Acid number	Maximum 15.
Iodine number	Maximum 15.
Saponification number	225–240.
Hydroxyl number	30–45.
Unsaponifiable material	Maximum 0.8 percent.
Refractive index (butyro)	60±1 at 48° C.

(b) It is used or intended for use as a crystallization inhibitor in vegetable oils and as a release agent in vegetable oils and vegetable shortenings, whereby the additive does not exceed 0.125 percent of the combined weight of the oil or shortening.

(c) To insure safe use of the additive, the label and labeling of the additive container shall bear, in addition to the other information required by the act:

(1) The name of the additive.

(2) Adequate directions to provide an oil or shortening that complies with the limitations prescribed in paragraph (b) of this section.

§ 121.1017 Calcium disodium EDTA.

The food additive calcium disodium EDTA (calcium disodium ethylenediaminetetraacetate) may be safely used in designated foods for the purposes and in accordance with the conditions prescribed, as follows:

(a) The additive contains a minimum of 99 percent by weight of either the dihydrate $C_{10}H_{12}O_8N_2CaNa_2 \cdot 2H_2O$ or the trihydrate $C_{10}H_{12}O_8N_2CaNa_2 \cdot 3H_2O$, or any mixture of the two.

(b) It is used or intended for use as follows:

(1) Alone, in the following foods at not to exceed the levels prescribed, calculated as the anhydrous compound:

Food	Limitation (parts per million)	Use
Canned carbonated soft drinks.	33	Promote flavor retention.
Canned white potatoes	110	Promote color retention.
Clams (cooked canned).	340	Promote color retention.
Crabmeat (cooked canned).	275	Retard struvite formation; promote color retention.
Dressings, nonstandardized.	75	Preservative.
Dried lima beans (cooked canned).	310	Promote color retention.
Fermented malt beverages.	25	Antigushing agent.
French dressing	75	Preservative.
Mayonnaise	75	Do.
Oleomargarine	75	Do.
Pecan pie filling	100	Promote color retention.
Potato salad	100	Preservative.
Processed dry pinto beans.	800	Promote color retention.
Salad dressing	75	Preservative.
Sandwich spread	100	Do.
Sauces	75	Do.
Shrimp (cooked canned).	250	Retard struvite formation; promote color retention.
Spice extractives in soluble carriers.	60	Promote color and flavor retention.

(2) With disodium EDTA (disodium ethylenediaminetetraacetate) in the following foods at not to exceed, in combination, the levels prescribed, calculated as anhydrous $C_{10}H_{12}O_8N_2CaNa_2$:

Food	Limitation (parts per million)	Use
Dressings, nonstandardized	75	Preservative.
French dressing	75	Do.
Mayonnaise	75	Do.
Salad dressing	75	Do.
Sandwich spread	100	Do.
Sauces	75	Do.

(c) To assure safe use of the additive:

(1) The label and labeling of the additive container shall bear, in addition to the other information required by the act, the name of the additive.

(2) The label or labeling of the additive container shall bear adequate use directions to provide a final food product that complies with the limitations provided in paragraph (b) of this section.

(d) In the standardized foods listed in paragraph (b) of this section, the additives are used only in compliance with the applicable standards of identity for such foods.

§ 121.1018 Acetylated monoglycerides.

The food additive acetylated monoglycerides may be safely used in or on food in accordance with the following prescribed conditions:

(a) The additive is manufactured by:

(1) The interesterification of edible fats with triacetin and in the presence of catalytic agents that are not food additives or are authorized by regulation, followed by a molecular distillation; or

(2) The direct acetylation of edible monoglycerides with acetic anhydride without the use of catalyst or molecular distillation, and with the removal by vacuum distillation, if necessary, of the acetic acid, acetic anhydride, and triacetin.

(b) The food additive has a Reichert-Meissl value of 75–150 and an acid value of less than 6.

(c) The food additive is used at a level not in excess of the amount reasonably required to produce its intended effect in food, or in food-processing, food-packing, or food-storage equipment.

§ 121.1019 Partially defatted, cooked cottonseed flour or similar products derived from cottonseed intended for human consumption.

The food additive partially defatted, cooked cottonseed flour may be used in or on food in accordance with the following prescribed conditions:

(a) The additive is derived from decorticated, partially defatted, cooked, ground cottonseed kernels prepared so as to meet the following specifications:

(1) Free gossypol content not to exceed 450 parts per million.

(2) It contains no added arsenic compound and therefore may not exceed a maximum natural background level of 0.2 part per million total arsenic, calculated as As.

(b) To insure safe use of the additive, the label of the food additive container shall bear, in addition to other information required by the act, the name of the additive, "partially defatted, cooked cottonseed flour."

§ 121.1020 Inorganic bromide.

The food additive inorganic bromide may be present as a residue in certain processed foods in accordance with the following conditions:

(a) When the food additive is present either as a result of the use of methyl bromide as a fumigant or the use of 1,2-dibromo-3-chloropropane as a nematocide in the soil in which the growing crop was produced, or both, the residues of inorganic bromide (calculated as Br) shall not exceed the following levels:

(1) 250 parts per million in or on concentrated tomato products and dried figs.

(2) 100 parts per million in or on dried dates and raisins.

(3) 50 parts per million in or on dried peaches.

(4) 30 parts per million in or on dried apples, dried apricots, and dried pears.

(5) 20 parts per million in or on dried prunes.

(b) When the food additive is present as the result of the use of a mixture of methyl bromide and ethylene dibromide as a fumigant, the residues of inorganic bromide (calculated as Br) shall not exceed the following levels:

(1) 400 parts per million in or on dried eggs and processed herbs and spices.

(2) 200 parts per million in or on oat flour.

(c) Where tolerances are established under sections 408 and 409 of the act, on both the raw agricultural commodities and processed foods made therefrom, the total residues of inorganic bromide in or on the processed food shall not be greater than those designated in paragraphs (a) and (b) of this section.

§ 121.1021 Hydroxypropyl methylcellulose.

The food additive hydroxypropyl methylcellulose may be safely used in food, except confectionery and except in standardized foods which do not provide for such use if:

(a) The additive complies with the definition and specifications prescribed in the National Formulary, 12th edition.

(b) It is used or intended for use as an emulsifier, film former, protective colloid, stabilizer, suspending agent, or thickener, in accordance with good manufacturing practice.

(c) To insure safe use of the additive, the container of the additive, in addition to being labeled as required by the general provisions of the act, shall be accompanied by labeling which contains adequate directions for use to provide a final product that complies with the limitations prescribed in paragraph (b) of this section.

§ 121.1022 Amprolium.

Tolerances are established as follows for residues of amprolium (1-(4-amino-2-*n*-propyl-5-pyrimidinylmethyl)-2-picolinium chloride hydrochloride) in the edible tissues and in eggs of chickens and turkeys:

(a) 1 part per million in uncooked liver and kidney.

(b) 0.5 part per million in uncooked muscle meat.

(c) Zero in eggs.

§ 121.1023 Acetone peroxides.

The food additive acetone peroxides may be safely used in flour, and in bread and rolls where standards of identity do not preclude its use, in accordance with the following prescribed conditions:

(a) The additive is a mixture of monomeric and linear dimeric acetone peroxide, with minor proportions of higher polymers, manufactured by reaction of hydrogen peroxide and acetone.

(b) The additive may be mixed with an edible carrier to give a concentration of: (1) 3 grams to 10 grams of hydrogen peroxide equivalent per 100 grams of the additive, plus carrier, for use in flour maturing and bleaching; or (2) approximately 0.75 gram of hydrogen peroxide equivalent per 100 grams of the additive, plus carrier, for use in dough conditioning.

(c) It is used or intended for use: (1) In maturing and bleaching of flour in a quantity not more than sufficient for such effect; and (2) as a dough-conditioning agent in bread and roll production at not to exceed the quantity of hydrogen peroxide equivalent necessary for the artificial maturing effect.

(d) To insure safe use of the additive, the label of the food additive container and any intermediate premix thereof shall bear, in addition to the other information required by the act:

(1) The name of the additive, "acetone peroxides."

(2) The concentration of the additive expressed in hydrogen peroxide equivalents per 100 grams.

(3) Adequate use directions to provide a final product that complies with the limitations prescribed in paragraph (c) of this section.

§ 121.1024 Hygromycin B.

A tolerance of zero is established for residues of the food additive hygromycin B in or on eggs of poultry and the uncooked edible tissues and byproducts of swine and poultry.

§ 121.1025 Streptomycin.

A tolerance of zero is established for residues of streptomycin in the edible tissues of chickens, turkeys, and swine, and in eggs.

§ 121.1026 Penicillin.

A tolerance of zero is established for residues of penicillin and the salts of penicillin in the edible tissues of chickens, turkeys, pheasants, quail, and swine, in eggs, and in milk or in any processed food because of use therein of such milk.

§ 121.1027 Hydroxylated lecithin.

The food additive hydroxylated lecithin may be safely used as an emulsifier in foods in accordance with the following conditions:

(a) The additive is obtained by the treatment of lecithin in one of the following ways, under controlled conditions whereby the separated fatty acid fraction of the resultant product has an acetyl value of 30 to 38:

(1) With hydrogen peroxide, benzoyl peroxide, lactic acid, and sodium hydroxide.

(2) With hydrogen peroxide, acetic acid, and sodium hydroxide.

(b) It is used or intended for use, in accordance with good manufacturing practice, as an emulsifier in foods, except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive, the label of the food additive container shall bear, in addition to the other information required by the act:

(1) The name of the additive, "hydroxylated lecithin."

(2) Adequate directions for its use.

§ 121.1028 Castor oil.

The food additive castor oil may be safely used in accordance with the following conditions:

(a) The additive meets the specifications of the United States Pharmacopeia XVII.

(b) The additive is used or intended for use as follows:

Use and Limitations

Hard candy production—As a release agent and antisticking agent, not to exceed 500 parts per million in hard candy.

Vitamin and mineral tablets—As a component of protective coatings.

§ 121.1029 Sorbitan monostearate.

The food additive sorbitan monostearate, which is a mixture of partial stearic and palmitic acid esters of sorbitol anhydrides, may be safely used in or on food in accordance with the following prescribed conditions:

(a) The food additive is manufactured by reacting stearic acid (usually containing associated fatty acids, chiefly palmitic) with sorbitol to yield essentially a mixture of esters.

(b) The food additive meets the following specifications:

Saponification number	147–157
Acid number	5–10
Hydroxyl number	235–260

(c) It is used or intended for use, alone or in combination with polyoxyethylene (20) sorbitan monostearate, as follows:

(1) As an emulsifier in whipped vegetable oil topping, with or without one or a combination of the following:

(i) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate);

(ii) Polyoxyethylene (20) sorbitan tristearate;

whereby the maximum amount of the additive or additives used does not exceed 0.4 percent of the weight of the finished whipped vegetable oil topping.

(2) As an emulsifier in cakes and cake mixes, with or without one or a combination of the following:

(i) Polyoxyethylene (20) sorbitan tristearate.

(ii) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

When used alone, the maximum amount of sorbitan monostearate shall not exceed 0.61 percent of the cake or cake mix, on a dry-weight basis. When used with polyoxyethylene (20) sorbitan tristearate and/or polysorbate 60 (polyoxyethylene (20) sorbitan monostearate), it shall not exceed 0.61 percent, nor shall the polyoxyethylene (20) sorbitan tristearate exceed 0.32 percent or the polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) exceed 0.46 percent, and no combination of the emulsifiers shall exceed 0.66 percent of the weight of the cake or cake mix, calculated on a dry-weight basis.

(3) As an emulsifier in nonstandardized confectionery coatings, alone or in combination with polyoxyethylene (20) sorbitan monostearate as follows:

(i) It is used alone in an amount not to exceed 1 percent of the weight of the finished nonstandardized confectionery coating.

(ii) It is used with polyoxyethylene (20) sorbitan monostearate in any combination of up to 1 percent sorbitan monostearate and up to 0.5 percent polyoxyethylene (20) sorbitan monostearate, and provided that the total combination does not exceed 1 percent of the weight of the finished nonstandardized confectionery coating.

(4) As an emulsifier in cake icings and cake fillings, with or without one or a combination of the following:

(i) Polyoxyethylene (20) sorbitan tristearate.

(ii) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

When used alone, the maximum amount of sorbitan monostearate shall not exceed 0.7 percent of the weight of the cake icing or cake filling. When used with polyoxyethylene (20) sorbitan tristearate and/or polysorbate 60 (polyoxyethylene (20) sorbitan monostearate), it shall not exceed 0.7 percent, nor shall the polyoxyethylene (20) sorbitan tristearate exceed 0.32 percent or the polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) exceed 0.46 percent, and no combination of these emulsifiers shall exceed 1 percent of the weight of the cake icing or cake filling.

(5) As an emulsifier in solid-state, edible vegetable fat-water emulsions intended for use as substitutes for milk or cream in beverage coffee, with or without one or a combination of the following:

(i) Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

(ii) Polyoxyethylene (20) sorbitan tristearate.

The maximum amount of the additive or additives shall not exceed 0.4 percent by weight of the finished edible vegetable fat-water emulsion.

(d) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive and any intermediate premixes shall bear:

(i) The name of the additive.

(ii) A statement of the concentration or strength of the additive in any intermediate premixes.

(2) The label or labeling shall bear adequate directions to provide a final product that complies with the limitations prescribed in paragraph (c) of this section.

§ 121.1030 Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).

The food additive polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) which is a mixture of polyoxyethylene ethers of mixed partial stearic and palmitic acid esters of sorbitol anhydrides and related compounds, may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is manufactured by reacting stearic acid (usually containing associated fatty acids, chiefly palmitic) with sorbitol to yield a product with a maximum acid number of 10 and a maximum water content of 0.2 percent, which is then reacted with ethylene oxide.

(b) The food additive meets the following specifications:

Saponification number 45–55.
Acid number 0–2.
Hydroxyl number 81–96.
Oxyethylene content 65 percent–69.5 percent.

(c) It is used or intended for use as follows:

(1) As an emulsifier in whipped vegetable oil topping with or without one or a combination of the following:

(i) Sorbitan monostearate;

(ii) Polyoxyethylene (20) sorbitan tristearate;

whereby the maximum amount of the additive or additives used does not exceed 0.4 percent of the weight of the finished whipped vegetable oil topping.

(2) As an emulsifier in cakes and cake mixes, with or without one or a combination of the following:

(i) Polyoxyethylene (20) sorbitan tristearate.

(ii) Sorbitan monostearate.

When used alone, the maximum amount of polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) shall not exceed 0.46 percent of the cake or cake mix, on a dry-weight basis. When used with polyoxyethylene (20) sorbitan tristearate and/or sorbitan monostearate, it shall not exceed 0.46 percent, nor shall the polyoxyethylene (20) sorbitan tristearate exceed 0.32 percent or the sorbitan monostearate exceed 0.61 percent, and no combination of these emulsifiers shall exceed 0.66 percent of the cake or cake mix, all calculated on a dry-weight basis.

(3) As an emulsifier in nonstandardized confectionery coatings, alone or in combination with sorbitan monostearate, as follows:

(i) It is used alone in an amount not to exceed 0.5 percent of the weight of the finished nonstandardized confectionery coatings.

(ii) It is used with sorbitan monostearate in any combination of up to 0.5 percent of polyoxyethylene (20) sorbitan monostearate and up to 1 percent of sorbitan monostearate, provided that the total combination does not exceed 1 percent of the weight of the finished nonstandardized confectionery coatings.

(4) [Reserved]

(5) As an emulsifier in cake icings and cake fillings, with or without one or a combination of the following:

(i) Polyoxyethylene (20) sorbitan tristearate.

(ii) Sorbitan monostearate.

When used alone, the maximum amount of polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) shall not exceed 0.46 percent of the weight of the cake icings and cake fillings. When used with polyoxyethylene (20) sorbitan tristearate and/or sorbitan monostearate, it shall not exceed 0.46 percent, nor shall the polyoxyethylene (20) sorbitan tristearate exceed 0.32 percent or the sorbitan monostearate exceed 0.7 percent, and no combination of these emulsifiers shall exceed 1 percent of the weight of the cake icing or cake filling.

(6) To impart greater opacity to sugar-type confection coatings whereby the maximum amount of the additive does not exceed 0.2 percent of the weight of the finished sugar coating.

(7) As an emulsifier in nonstandardized dressings made without egg yolk, whereby the maximum amount of the additive does not exceed 0.3 percent of the weight of the finished dressings.

(8) As an emulsifier, alone or in combination with polysorbate 80, in shortenings and edible oils intended for use in nonstandardized baked goods, baking mixes, icings, fillings, and toppings, and in the frying of foods, as follows:

(i) It is used alone in an amount not to exceed 1 percent of the weight of the finished shortening or oil.

(ii) It is used with polysorbate 80 in any combination providing no more than 1 percent of polysorbate 60 and no more than 1 percent of polysorbate 80, provided that the total combination does not exceed 1 percent of the finished shortening or oil.

(9) As an emulsifier in solid-state, edible vegetable fat-water emulsions intended for use as substitutes for milk or cream in beverage coffee, with or without one or a combination of the following:

(i) Polyoxyethylene (20) sorbitan tristearate.

(ii) Sorbitan monostearate.

The maximum amount of the additive or additives shall not exceed 0.4 percent by weight of the finished edible vegetable fat-water emulsion.

(10) As a foaming agent in nonalcoholic mixes, to be added to alcoholic beverages in the preparation of mixed alcoholic drinks, at a level not to exceed 4.5 percent by weight of the nonalcoholic mix.

(d) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive and any intermediate premixes shall bear:

(i) The name of the additive.

(ii) A statement of the concentration or strength of the additive in any intermediate premixes.

(2) The label or labeling shall bear adequate directions to provide a final product that complies with the limitations prescribed in paragraph (c) of this section.

§ 121.1031 Food starch-modified.

Food starch-modified as described in this section may be safely used in food. The quantity of any substance employed to effect such modification shall not exceed the amount reasonably required to accomplish the intended physical or technical effect, nor exceed any limitation prescribed. To insure safe use of the food starch-modified, the label of the food additive container shall bear the name of the additive "food starch-modified" in addition to other information required by the act. Food starch may be modified by treatment prescribed as follows:

(a) Food starch may be acid-modified by treatment with hydrochloric acid or sulfuric acid or both.

(b) Food starch may be bleached by treatment with one or more of the following:

	Limitation
Active oxygen obtained from hydrogen peroxide and/or peracetic acid, not to exceed 0.45 percent of active oxygen.	----------------
Ammonium persulfate, not to exceed 0.075 percent and sulfur dioxide, not to exceed 0.05 percent.	----------------
Chlorine, as sodium hypochlorite, not to exceed 0.0082 pound of chlorine per pound of dry starch.	----------------
Potassium permanganate, not to exceed 0.2 percent.	Residual manganese (calculated as Mn), not to exceed 50 parts per million in food starch-modified.
Sodium chlorite, not to exceed 0.5 percent.	----------------

(c) Food starch may be oxidized by treatment with chlorine, as sodium hypochlorite, not to exceed 0.055 pound of chlorine per pound of dry starch.

(d) Food starch may be esterified by treatment with one of the following:

	Limitation
Acetic anhydride, not to exceed 5 percent.	----------------
Adipic anhydride, not to exceed 0.12 percent, and acetic anhydride, not to exceed 5 percent.	----------------
1-Octenyl succinic anhydride, not to exceed 3 percent.	----------------
1-Octenyl succinic anhydride, not to exceed 2 percent, and aluminum sulfate, not to exceed 2 percent.	----------------
Phosphorus oxychloride, not to exceed 0.1 percent.	----------------
Sodium trimetaphosphate.	Residual phosphate in food starch-modified not to exceed 0.04 percent, calculated as phosphorus.
Sodium tripolyphosphate and sodium trimetaphosphate.	Residual phosphate in food starch-modified not to exceed 0.4 percent calculated as phosphorus.
Succinic anhydride, not to exceed 4 percent.	----------------
Vinyl acetate.	Acetyl groups in food starch-modified not to exceed 2.5 percent.

(e) Food starch may be etherified by treatment with one of the following:

Acrolein, not to exceed 0.6 percent.
Epichlorohydrin, not to exceed 0.3 percent.
Propylene oxide, not to exceed 25 percent.

(f) Food starch may be esterified and etherified by treatment with one of the following:

	Limitation
Acrolein, not to exceed 0.6 percent and vinyl acetate, not to exceed 7.5 percent.	Acetyl groups in food starch-modified not to exceed 2.5 percent.
Epichlorohydrin, not to exceed 0.3 percent, and acetic anhydride, not to exceed 5 percent.	----------------
Epichlorohydrin, not to exceed 0.3 percent, and succinic anhydride, not to exceed 4 percent.	----------------
Phosphorus oxychloride, not to exceed 0.1 percent, and propylene oxide, not to exceed 10 percent.	----------------

(g) Food starch may be modified by treatment with one of the following:

Chlorine, as sodium hypochlorite, not to exceed 0.055 pound of chlorine per pound of dry starch; 0.45 percent of active oxygen obtained from hydrogen peroxide; and propylene oxide, not to exceed 25 percent.
Sodium hydroxide, not to exceed 1 percent.

(h) Food starch may be modified by a combination of the treatments prescribed by paragraphs (a) and/or (b) of this section and any one of the treatments prescribed by paragraph (c), (d), (e), (f), or (g) of this section, subject to any limitations prescribed by the paragraphs named.

§ 121.1032 Yellow prussiate of soda.

Yellow prussiate of soda (sodium ferrocyanide decahydrate; $Na_4FE(CN)_6 \cdot 10H_2O$) may be safely used as a component of food for the uses prescribed in paragraph (a) of this section, subject to the limitations prescribed in this section:

(a) The uses permitted are as follows:

Uses	*Limitations*
As an anticaking agent in salt	5 parts per million calculated as anhydrous sodium ferrocyanide.
As an adjuvant in the production of dendritic crystals of salt.	13 parts per million calculated as anhydrous sodium ferrocyanide.

(b) The additive contains a minimum of 99 percent by weight of sodium ferrocyanide decahydrate.

§ 121.1033 Novobiocin.

A tolerance of zero is established for residues of novobiocin in milk from dairy animals, in eggs and in the uncooked edible tissues of chickens and turkeys.

§ 121.1034 BHT.

The food additive BHT (butylated hydroxytoluene), alone or in combination with other antioxidants permitted in this Subpart D may be safely used in or on specified foods, as follows:

(a) The BHT meets the following specification: Assay (total BHT) 99 percent minimum.

(b) The BHT is used alone or in combination with BHA, as an antioxidant in foods, as follows:

Food	*Limitations (total BHA and BHT) parts per million*
Dry breakfast cereals	50
Emulsion stabilizers for shortenings	200
Potato flakes	50
Potato granules	10
Sweetpotato flakes	50

(c) To assure safe use of the additive:

(1) The label of any market package of the additive shall bear, in addition to the other information required by the act, the name of the additive.

(2) When the additive is marketed in a suitable carrier, in addition to meeting the requirement of subparagraph (1) of this paragraph, the label shall declare the percentage of the additive in the mixture.

§ 121.1035 BHA.

The food additive BHA (butylated hydroxyanisole) alone or in combination with other antioxidants permitted in food for human consumption in this subpart D may be safely used in or on specified foods, as follows:

(a) The BHA meets the following specification:

Assay (total BHA), 98.5 percent minimum.
Melting point 48° C. minimum.

(b) The BHA is used alone or in combination with BHT, as an antioxidant in foods, as follows:

Food	*Limitations (total BHA and BHT) parts per million*
Active dry yeast	[1] 1,000
Beverages and desserts prepared from dry mixes	[1] 2
Dry breakfast cereals	50
Dry diced glaced fruit	[1] 32
Dry mixes for beverages and desserts	[1] 90
Emulsion stabilizers for shortenings	200
Potato flakes	50
Potato granules	10
Sweetpotato flakes	50

[1] BHA only.

(c) To assure safe use of the additive:

(1) The label of any market package of the additive shall bear, in addition to the other information required by the act, the name of the additive.

(2) When the additive is marketed in a suitable carrier, in addition to meeting the requirement of subparagraph (1) of this paragraph, the label shall declare the percentage of the additive in the mixture.

(3) The label or labeling of dry mixes for beverages and desserts shall bear adequate directions for use to provide that beverages and desserts prepared from the dry mixes contain no more than 2 parts per million BHA.

§ 121.1036 Monoglyceride citrate.

A food additive that is a mixture of glyceryl monooleate and its citric acid monoester manufactured by the reaction of glyceryl monooleate with citric acid under controlled conditions may be safely used as a synergist and solubilizer for antioxidants in oils and fats, when used in accordance with the conditions prescribed in this section.

(a) The food additive meets the following specifications:

Acid number, 70–100.
Total citric acid (free and combined), 14 percent–17 percent.

(b) It is used, or intended for use, in antioxidant formulations for addition to oils and fats whereby the additive does not exceed 200 parts per million of the combined weight of the oil or fat and the additive.

(c) To assure safe use of the additive:

(1) The container label shall bear, in addition to the other information required by the act, the name of the additive.

(2) The label or accompanying labeling shall bear adequate directions for the use of the additive which, if followed, will result in a food that complies with the requirements of this section.

§ 121.1037 Calcium pantothenate, calcium chloride double salt.

The food additive calcium chloride double salt of calcium pantothenate may be safely used in foods for special dietary uses in accordance with good manufacturing practice and under the following prescribed conditions:

(a) The food additive is of the *d* (dextrorotatory) or the *dl* (racemic) form.

(b) To assure safe use of the food additive, the label and labeling of the food additive container, or that of any intermediate premixes prepared therefrom, shall bear, in addition to the other information required by the act, the following:

(1) The name of the additive "calcium chloride double salt of *d*-calcium pantothenate" or "calcium chloride double salt of *dl*-calcium pantothenate", whichever is appropriate.

(2) A statement of the appropriate concentration of the additive, expressed as pantothenic acid.

§ 121.1038 Tetradifon.

Tolerances are established for residues of tetradifon (2,4,5,4′-tetrachlorodiphenyl sulfone) when present as a result of its application as a pesticide chemical to growing agricultural crops, as follows:

120 parts per million in or on dried hops.

10 parts per million in or on dried figs.

8 parts per million in or on dried tea.

§ 121.1039 Methylene chloride.

Methylene chloride may be present in food under the following conditions:

(a) In spice oleoresins as a residue from the extraction of spice, at a level not to exceed 30 parts per million: *Provided*, That, if residues of other chlorinated solvents are also present, the total of all residues of such solvents shall not exceed 30 parts per million.

(b) In hops extract as a residue from the extraction of hops, at a level not to exceed 2.2 percent, *Provided*, That:

(1) The hops extract is added to the wort before or during cooking in the manufacture of beer.

(2) The label of the hops extract identifies the presence of the methylene chloride and provides for the use of the hops extract only as prescribed by subparagraph (1) of this paragraph.

§ 121.1040 Ethylene dichloride.

A tolerance of 30 parts per million is established for ethylene dichloride in spice oleoresins when present therein as a residue from the extraction of spice; *Provided, however*, That if residues of other chlorinated solvents are also present the total of all residues of such solvents shall not exceed 30 parts per million.

§ 121.1041 Trichloroethylene.

Tolerances are established for residues of trichloroethylene resulting from its use as a solvent in the manufacture of foods as follows:

Decaffeinated ground coffee.	25 parts per million.
Decaffeinated soluble (instant) coffee extract.	10 parts per million.
Spice oleoresins	30 parts per million (provided that if residues of other chlorinated solvents are also present, the total of all residues of such solvents in spice oleoresins shall not exceed 30 parts per million).

§ 121.1042 Acetone.

A tolerance of 30 parts per million is established for acetone in spice oleoresins when present therein as a residue from the extraction of spice.

§ 121.1043 Isopropyl alcohol.

Tolerances are established for residues of isopropyl alcohol resulting from its use as a solvent in the manufacture of foods as follows:

Spice oleoresins	50 parts per million.
Lemon oil	6 parts per million.

§ 121.1044 Methyl alcohol.

A tolerance of 50 parts per million is established for methyl alcohol in spice oleoresins when present therein as a residue from the extraction of spice.

§ 121.1045 Hexane residues.

A tolerance of 25 parts per million is established for hexane in spice oleoresins when present therein as a residue from the extraction of spice.

§ 121.1046 Oxytetracycline.

Tolerances are established for residues of oxytetracycline in food as follows:

(a) In edible tissues of chickens and turkeys fed on oxytetracycline-medicated feed as follows:

(1) 3 parts per million in uncooked kidneys.

(2) 1 part per million in uncooked muscle, liver, fat, and skin.

Residues of oxytetracycline in chicken and turkey tissues shall not exceed the 7 parts per million established in § 120.148 of this chapter, where the birds have been fed on oxytetracycline-containing feed and the carcass dipped in oxytetracycline solution.

(b) Zero in uncooked edible tissues of swine.

(c) Zero in uncooked edible tissues and byproducts of beef cattle.

§ 121.1047 Calcium stearyl-2-lactylate.

The food additive calcium stearyl-2-lactylate may be safely used in or on food in accordance with the following prescribed conditions:

(a) The additive is a mixture of calcium salts of stearyl lactylates and minor proportions of other salts of related acids, manufactured by reaction of stearic acid, lactic acid, and calcium carbonate.

(b) The additive meets the following specifications:

Acid number	82–103
Calcium content	4.2%–4.4%
Lactic acid content	32%–35%
Ester number	140–188

(c) It is used or intended for use as follows:

(1) As a dough conditioner in yeast-leavened bakery products and prepared mixes for yeast-leavened bakery products in an amount not to exceed 0.5 part for each 100 parts by weight of flour used.

(2) As a whipping agent in:

(i) Liquid and frozen egg white at a level not to exceed 0.05 percent.

(ii) Dried egg white at a level not to exceed 0.5 percent.

(d) To assure safe use of the additive:

(1) The label and labeling of the food additive and any intermediate premix prepared therefrom shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive.

(ii) A statement of the concentration or strength of the additive in any intermediate premixes.

(2) The label or labeling of the food additive shall also bear adequate directions of use to provide a finished food that complies with the limitations prescribed in paragraph (c) of this section.

§ 121.1048 Lactylic esters of fatty acids.

Lactylic esters of fatty acids may be safely used in food in accordance with the following prescribed conditions:

(a) They are prepared from lactic acid and fatty acids meeting the requirements of § 121.1070(b).

(b) They are used as emulsifiers, plasticizers, or surface-active agents in the following foods, when standards of identity do not preclude their use:

Foods	*Limitations*
Bakery mixes	------------
Baked products	------------
Cake icings, fillings, and toppings.	------------
Dehydrated fruits and vegetables.	------------
Dehydrated fruit and vegetable juices.	------------
Frozen desserts	------------
Liquid shortening	For household use.
Pancake mixes	------------
Precooked instant rice	------------
Pudding mixes	------------
Solid-state edible vegetable fat-water emulsions.	As substitutes for milk or cream in beverage coffee.

(c) They are used in an amount not greater than required to produce the intended physical or technical effect, and they may be used with shortening and edible fats and oils when such are required in the foods identified in paragraph (b) of this section.

§ 121.1049 Tylosin.

A tolerance of zero is established for residues of the food additive tylosin in eggs of chickens and turkeys and in the uncooked, edible tissues and byproducts of swine, turkeys, and chickens.

§ 121.1050 Coumarone-indene resin.

The food additive coumarone-indene resin may be safely used on grapefruit, lemons, limes, oranges, tangelos, and tangerines in accordance with the following prescribed conditions:

(a) The food additive is manufactured by the polymerization of a crude, heavy coal-tar solvent naphtha meeting the following specifications:

(1) It is a mixture of indene, indan (hydrindene), substituted benzenes, and related compounds.

(2) It contains no more than 0.25 percent tar bases.

(3) 95 percent distills in the range 167° C.–184° C.

(b) The food additive meets the following specifications:

(1) Soft point, ring and ball: 126° C. minimum as determined by the American Society for Testing Materials Method No. E–28–51T.

(2) Refractive index $\left(\frac{n^{25}}{D}\right)$ 1.63–1.64.

(c) It is used or intended for use as a protective coating for grapefruit, lemons, limes, oranges, tangelos, and tangerines whereby the maximum amount of the resin remaining on the fruit does not exceed 200 parts per million on a fresh-weight basis.

(d) To assure safe use of the additive:

(1) The label of the market package or any intermediate premix of the additive shall bear, in addition to the other information required by the act:

(i) The name of the additive, coumarone-indene resin.

(ii) A statement of the concentration of the additive therein.

(2) The label or accompanying labeling shall bear adequate directions that, if followed, will result in a finished food not in conflict with the requirements of this section.

§ 121.1051 Dihydrostreptomycin.

A tolerance of zero is established for residues of dihydrostreptomycin in edible tissues of calves, in milk from dairy animals, and in any food in which such milk has been used.

§ 121.1052 Metaldehyde.

The food additive metaldehyde may be safely used as a preharvest spray or dust on strawberries to control slugs and snails, in accordance with the following prescribed conditions:

(a) The food additive is applied as a preharvest spray or dust on growing strawberries at a rate of not more than 1 pound per acre, calculated as metaldehyde, and applied not later than 14 days before first picking.

(b) A tolerance of zero is established for residues of metaldehyde on strawberries.

(c) To insure safe usage of the additive:

(1) The label of any market package of the additive shall bear, in addition to other information required by the act, the name of the additive.

(2) The label of any prepared mix or concentrate shall indicate the percentage by weight of the additive.

(3) The label shall bear adequate directions for use, in conformance with paragraph (a) of this section and may indicate that in the event the metaldehyde is removed by rain an additional application may be made provided such application is made not less than 14 days before first picking.

§ 121.1053 Sorbitol.

The food additive sorbitol may be safely used in food provided the amount used does not exceed that reasonably required to accomplish the intended physical or technical effect.

§ 121.1054 Promazine hydrochloride.

A tolerance of zero is established for residues of promazine hydrochloride in or on the uncooked edible tissues of animals that have consumed the additive in feed.

§ 121.1055 Nystatin.

A tolerance of zero is established for residues of the food additive nystatin in or on eggs of poultry and the uncooked edible tissues and byproducts of swine and poultry.

§ 121.1056 Disodium EDTA.

The food additive disodium EDTA (disodium ethylenediaminetetraacetate) may be safely used in designated foods for the purposes and in accordance with the following prescribed conditions:

(a) The additive contains a minimum of 99 percent disodium ethylenediaminetetraacetate dihydrate ($C_{10}H_{14}O_8N_2Na_2 \cdot 2H_2O$).

(b) It is used or intended for use as follows:

(1) Alone, in the following foods at not to exceed the levels prescribed, calculated as anhydrous calcium disodium EDTA:

Food	Limitation (parts per million)	Use
Aqueous multivitamin preparations.	150	With iron salts as a stabilizer for vitamin B_{12} in liquid multivitamin preparations.
Canned black-eyed peas.	145	Promote color retention.
Canned cooked chickpeas.	165	Do.
Canned kidney beans.	165	Preservative.
Canned strawberry pie filling.	500	Promote color retention.
Dressings, nonstandardized.	75	Preservative.
French dressing	75	Do.
Frozen white potatoes including cut potatoes.	100	Promote color retention.
Mayonnaise	75	Preservative.
Ready-to-eat cereal products containing dried bananas.	315 in dried banana component of cereal product.	Promote color retention.
Salad dressing	75	Preservative.
Sandwich spread	100	Do.
Sauces	75	Do.

(2) With calcium disodium EDTA (calcium disodium ethylenediaminetetraacetate; calcium disodium (ethylenedinitrilo) tetraacetate), in the following foods at not to exceed, in combination, the levels prescribed, calculated as anhydrous $C_{10}H_{12}O_8N_2CaNa_2$:

Food	Limitation (parts per million)	Use
Dressings, nonstandardized.	75	Preservative.
French dressing	75	Do.
Mayonnaise	75	Do.
Salad dressing	75	Do.
Sandwich spread	100	Do.
Sauces	75	Do.

(c) To assure the safe use of the additive:

(1) The label and labeling of the additive container shall bear, in addition to the other information required by the act, the name of the additive.

(2) The label or labeling of the additive container shall bear adequate use directions to provide a final food product that complies with the limitations provided in paragraph (b) of this section.

(d) In the standardized foods listed in paragraph (b) (1) and (2) of this section the additives are used only in compliance with the applicable standards of identity for such foods.

§ 121.1057 Polyethylene glycol 6000.

The food additive polyethylene glycol 6000 may be safely used in accordance with the following prescribed conditions:

(a) Polyethylene glycol 6000 is the condensation polymer of ethylene oxide and water with an average molecular weight ranging from 6000 to 7500.

(b) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive and any intermediate premixes shall bear:

(i) The name of the additive.

(ii) A statement of the concentration of the additive in any intermediate premixes.

(2) The label or labeling shall bear adequate directions to provide a final product that complies with the limitation prescribed in paragraph (c) of this section.

(c) It is used or intended for use in food at a level not greater than that required to accomplish the intended physical or technical effect:

(1) As a binder and plasticizing agent in tablets used for food.

(2) As an adjuvant in tablet coatings to improve resistance to moisture and oxidation.

(3) As an adjuvant to improve flavor and as a bodying agent, with those nonnutritive sweeteners identified in § 121.101(d)(4).

§ 121.1058 Silicon dioxide.

The food additive silicon dioxide may be safely used in specified foods in accordance with the following conditions:

(a) The food additive is manufactured by vapor phase hydrolysis or by other means whereby the particle size is such as to accomplish the intended effect.

(b) It is used or intended for use in food as an anticaking agent as follows:

Food:	*Limitations (percent)*
Salt and seasoned salt	1
Sodium bicarbonate	1
Vitamin products	0.5
Special dietary products	0.75
Dehydrated honey	2
Dehydrated molasses	2
Dehydrated nondiastatic malt	2
Spices	2
Meat curing compounds	2
Flavoring powders	2

(c) It is used or intended for use as a stabilizer in the production of beer, and is removed from the beer by filtration prior to final processing.

(d) It is used or intended for use as an adsorbent for *dl-a*-tocopheryl acetate and pantothenyl alcohol in tableted foods for special dietary use, in an amount not greater than that required to accomplish the intended physical or technical effect.

§ 121.1059 Chewing gum base.

The food additive chewing gum base may be safely used in the manufacture of chewing gum in accordance with the following prescribed conditions:

(a) The food additive consists of one or more of the following substances that meet the specifications and limitations prescribed in this paragraph, used in amounts not to exceed those required to produce the intended physical or other technical effect.

MASTICATORY SUBSTANCES

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN

Family	*Genus and species*
Sapotaceae:	
Chicle	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Chiquibul	Manilkara zapotilla Gilly.
Crown gum	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Gutta hang kang	Palaquium leiocarpum Boerl. and Palaquium oblongifolium Burck.
Massaranduba balata (and the solvent-free resin extract of Massaranduba balata).	Manilkara huberi (Ducke) Chevalier.
Massaranduba chocolate	Manilkara solimoesensis Gilly.
Nispero	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Rosidinha (rosadinha)	Micropholis (also known as Sideroxylon) spp.
Venezuelan chicle	Manilkara williamsii Standley and related spp.

MASTICATORY SUBSTANCES—Continued

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN—continued

Family	*Genus and species*
Apocynaceae:	
Jelutong	Dyera costulata Hook. F. and Dyera lowii Hook. F.
Leche caspi (sorva)	Couma macrocarpa Barb. Rodr.
Pendare	Couma macrocarpa Barb. Rodr. and Couma utilis (Mart.) Muell. Arg.
Perillo	Couma macrocarpa Barb. Rodr. and Couma utilis (Mart.) Muell. Arg.
Moraceae:	
Leche de vaca	Brosimum utile (H.B.K.) Pittier and Poulsenia spp.; also Lacmellea standleyi (Woodson), Monachino (Apocynaceae).
Niger gutta	Ficus platyphylla Del.
Tunu (tuno)	Castilla fallax Cook.
Euphorbiaceae:	
Chilte	Cnidoscolus (also known as Jatropha) elasticus Lundell and Cnidoscolus tepiquensis (Cost. and Gall.) McVaugh.
Natural rubber (smoked sheet and latex solids).	Hevea brasiliensis.

Synthetic	*Specifications*
Butadiene-styrene rubber	Basic polymer.
Isobutylene-isoprene copolymer (butyl rubber).	Do.
Paraffin	Synthesized by Fischer-Tropsch process from carbon monoxide and hydrogen, which are catalytically converted to a mixture of paraffin hydrocarbons. Lower molecular weight fractions are removed by distillation. The residue is hydrogenated and further treated by percolation through activated charcoal. The product has a congealing point of 200° F.-210° F. as determined by A.S.T.M. D-938-49 method; a maximum oil content of 0.5 percent as determined by A.S.T.M. D-721-56T method; and an absorptivity of less than 0.01 at 290 millimicrons in decahydronaphthalene at 190° F. as determined by A.S.T.M. 131 method.
Petroleum wax	Complying with § 121.1156.
Polyethylene	Molecular weight 2,000-21,000.
Polyisobutylene	Minimum molecular weight 37,000 (Flory).
Polyvinyl acetate	Molecular weight, minimum 2,000.

PLASTICIZING MATERIALS (SOFTENERS)

Glycerol ester of partially dimerized rosin.	Having an acid number of 3-8, a drop-softening point of 109° C.-119° C., and a color of M or paler.
Glycerol ester of partially hydrogenated gum or wood rosin.	Having an acid number of 3-10, a drop-softening point of 79° C.-88° C., and a color of N or paler.
Glycerol ester of polymerized rosin	Having an acid number of 3-12, a melting-point range of 80° C.-126° C., and a color of M or paler.
Glycerol ester of gum or wood rosin	Having an acid number of 5-9, a drop-softening point of 88° C.-96° C., and a color of N or paler. The ester is purified by steam stripping.
Lanolin	
Methyl ester of rosin, partially hydrogenated.	Having an acid number of 4-8, a refractive index of 1.5170-1.5205 at 20° C., and a viscosity of 23-66 poises at 25° C. The ester is purified by steam stripping.
Pentaerythritol ester of partially hydrogenated gum or wood resin.	Having an acid number of 7-18, a drop-softening point of 102° C.-110° C., and a color of K or paler.
Pentaerythritol ester of gum or wood rosin.	Having an acid number of 6-16, a drop-softening point of 109° C.-116° C., and a color of M or paler.
Rice bran wax	Complying with § 121.1098.
Stearic acid	Complying with § 121.1070.
Sodium and potassium stearates	Complying with § 121.1071.

TERPENE RESINS

Snythetic resin	Consisting of polymers of β-pinene.
Natural resin	Consisting of polymers of α-pinene; softening point minimum 155° C., determined by U.S.P. closed-capillary method.

ANTIOXIDANTS

Butylated hydroxyanisole	Not to exceed antioxidant content of 0.1% when used alone or in any combination.
Butylated hydroxytoluene	
Propyl gallate	

MISCELLANEOUS

Sodium sulfate	
Sodium sulfide	Reaction-control agent in synthetic polymer production.

(b) In addition to the substances listed in paragraph (a) of this section, chewing gum base may also include substances generally recognized as safe in food.

(c) To assure safe use of the additive, in addition to the other information required by the act, the label and labeling of the food additive shall bear the name of the additive, "chewing gum base." As used in this paragraph, the term "chewing gum base" means the manufactured or partially manufactured nonnutritive masticatory substance comprised of one or more of the ingredients named and so defined in paragraph (a) of this section.

§ 121.1060 Combustion product gas.

The food additive combustion product gas may be safely used in the processing and packaging of the foods designated in paragraph (c) of this section for the purpose of removing and displacing oxygen in accordance with the following prescribed conditions:

(a) The food additive is manufactured by the controlled combustion in air of butane, propane, or natural gas. The combustion equipment shall be provided with an absorption-type filter capable of removing possible toxic impurities, through which all gas used in the treatment of food shall pass; and with suitable controls to insure that any combustion products failing to meet the specifications provided in this section will be prevented from reaching the food being treated.

(b) The food additive meets the following specifications:

(1) Carbon monoxide content not to exceed 4.5 percent by volume.

(2) The ultraviolet absorbance in isooctane solution in the range 255 millimicrons to 310 millimicrons not to exceed one-third of the standard reference absorbance when tested as described in paragraph (e) of this section.

(c) It is used or intended for use to displace or remove oxygen in the processing, storage, or packaging of beverage products and other food, except fresh meats.

(d) To assure safe use of the additive, in addition to the other information required by the act, the label or labeling of the combustion device shall bear adequate directions for use to provide a combustion product gas that complies with the limitations prescribed in paragraph (b) of this section, including instructions to assure proper filtration.

(e) The food additive is tested for compliance with paragraph (b)(2) by the following empirical method:

Spectrophotometric measurements. All measurements are made in an ultraviolet spectrophotometer in optical cells of 5 centimeters in length, and in the range of 255 millimicrons to 310 millimicrons, under the same instrumental conditions. The standard reference absorbance is the absorbance at 275 millimicrons of a standard reference solution of naphthalene (National Bureau of Standards Material No. 577 or equivalent in purity) containing a concentration of 1.4 milligrams per liter in purified isooctane, measured against isooctane of the same spectral purity in 5-centimeter cells. (This absorbance will be approximately 0.30.)

Solvent. The solvent used is pure grade isooctane having an ultraviolet absorbance not to exceed 0.05 measured against distilled water as a reference. Upon passage of purified inert gas through some isooctane under the identical conditions of the test, a lowering of the absorbance value has been observed. The absorbance of isooctane to be used in this procedure shall not be more than 0.02 lower in the range 255 millimicrons to 310 millimicrons, inclusive, than that of the untreated solvent as measured in a 5-centimeter cell. If necessary to obtain the prescribed purities, the isooctane may be passed through activated silica gel.

Apparatus. To assure reproducible results, the additive is passed into the isooctane solution through a gas-absorption train consisting of the following components and necessary connections:

1. A gas flow meter with a range up to 30 liters per hour provided with a constant differential relay or other device to maintain a constant flow rate independent of the input pressure.

2. An absorbtion apparatus consisting of an inlet gas dispersion tube inserted to the bottom of a covered cylindrical vessel with a suitable outlet on the vessel for effluent gas. The dimensions and arrangement of tube and vessel are such that the inlet tube introduces the gas at a point not above 5¼ inches below the surface of the solvent through a sintered glass outlet. The dimensions of the vessel are such, and both inlet and vessel are so designed, that the gas can be bubbled through 60 milliliters of isooctane solvent at a rate up to 30 liters per hour without mechanical loss of solvent. The level corresponding to 60 milliliters should be marked on the vessel.

3. A cooling bath containing crushed ice and water to permit immersion of the absorption vessel at least to the solvent level mark.

Caution. The various parts of the absorption train must be connected by gastight tubing and joints composed of materials which will neither remove components from nor add components to the gas stream. The gas source is connected in series to the flow-rate device, the flow meter, and the absorption apparatus in that order. Ventilation should be provided for the effluent gases which may contain carbon monoxide.

Sampling procedure. Immerse the gas-absorption appartus containing 60 milliliters of isooctane in the coolant bath so that the solvent is completely immersed. Cool for at least 15 minutes and then pass 120 liters of the test gas through the absorption train at a rate of 30 liters per hour or less. Maintain the coolant bath at 0° C. throughout. Remove the absorption vessel from the bath, disconnect, and warm to room temperature. Add isooctane to bring the contents of the absorption vessel to 60 milliliters, and mix. Determine the absorbance of the solution in the 5-centimeter cell in the range 255 millimicrons to 310 millimicrons, inclusive, compared to isooctane. The absorbance of the solution of combustion product gas shall not exceed that of the isooctane solvent at any wavelength in the specified range by more than one-third of the standard reference absorbance.

§ 121.1061 Captan.

A tolerance of 100 parts per million is established for residues of captan (*N*-trichloromethyl mercapto-4-cyclohexene-1,2-dicarboximide) in or on washed raisins when present as a result of fungicidal treatment by preharvest application to grapes and postharvest application during the drying process.

§ 121.1062 Methyl formate.

The food additive methyl formate may be safely used in or on specified dried fruits in accordance with the following prescribed conditions:

(a) It is used or intended for use in or on raisins and dried Zante currants as a bulk and package fumigant.

(b) It is used in accordance with directions registered with the United States Department of Agriculture, and so used that the total formic acid present, free and combined in the finished product shall not exceed 250 parts per million.

(c) To assure safe use of the additive, its label and labeling shall conform to that registered with the United States Department of Agriculture.

§ 121.1063 Sodium nitrate.

The food additive sodium nitrate may be safely used in or on specified foods in accordance with the following prescribed conditions:

(a) It is used or intended for use as follows:

(1) As a preservative and color fixative, with or without sodium nitrite, in smoked, cured sablefish, smoked, cured salmon, and smoked, cured shad, so that the level of sodium nitrate does not exceed 500 parts per million and the level of sodium nitrite does not exceed 200 parts per million in the finished product.

(2) As a preservative and color fixative, with or without sodium nitrite in meat-curing preparations for the home curing of meat and meat products (including poultry and wild game), with directions for use which limit the amount of sodium nitrate to not more than 500 parts per million in the finished meat product and the amount of sodium nitrite to not more than 200 parts per million in the finished meat product.

(b) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive or of a mixture containing the additive shall bear:

(i) The name of the additive.

(ii) A statement of the concentration of the additive in any mixture.

(2) If in a retail package intended for household use, the label and labeling of the additive, or of a mixture containing the additive, shall bear adequate directions for use to provide a final food product that complies with the limitations prescribed in paragraph (a) of this section.

(3) If in a retail package intended for household use, the label of the additive, or of a mixture containing the additive, shall bear the statement "Keep out of the reach of children."

§ 121.1064 Sodium nitrite.

The food additive sodium nitrite may be safely used in or on specified foods in accordance with the following prescribed conditions:

(a) It is used or intended for use as follows:

(1) As a preservative and color fixative in smoked cured tuna fish products so that the level of sodium nitrite does not exceed 10 parts per million in the finished product.

(2) As a preservative and color fixative, with or without sodium nitrate, in smoked, cured sablefish, smoked, cured salmon, and smoked, cured shad so that the level of sodium nitrite does not exceed 200 parts per million and the level of sodium nitrate does not exceed 500 parts per million in the finished product.

(3) As a preservative and color fixative, with sodium nitrate, in meat-curing preparations for the home curing of meat and meat products (including poultry and wild game), with directions for use which limit the amount of sodium nitrite to not more than 200 parts per million in the finished meat product, and the amount of sodium nitrate to not more than 500 parts per million in the finished meat product.

(b) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive or of a mixture containing the additive shall bear:

(i) The name of the additive.

(ii) A statement of the concentration of the additive in any mixture.

(2) If in a retail package intended for household use, the label and labeling of the additive, or of a mixture containing the additive, shall bear adequate directions for use to provide a final food product which complies with the limitations prescribed in paragraph (a) of this section.

(3) If in a retail package intended for household use, the label of the additive, or of a mixture containing the additive, shall bear the statement "Keep out of the reach of children".

§ 121.1065 Octafluorocyclobutane.

The food additive octafluorocyclobutane may be safely used as a propellant and aerating agent in foamed or sprayed food products in accordance with the following conditions:

(a) The food additive meets the following specifications:

99.99 percent octafluorocyclobutane.

Less than 0.1 part per million fluoroolefins, calculated as perfluoroisobutylene.

(b) The additive is used or intended for use alone or with one or more of the following substances: Carbon dioxide, nitrous oxide, and propane, as a propellant and aerating agent for foamed or sprayed food products, except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive:

(1) The label of the food additive container shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive, octafluorocyclobutane.

(ii) The percentage of the additive present in the case of a mixture.

(iii) The designation "food grade."

(2) The label or labeling of the food additive container shall bear adequate directions for use.

§ 121.1066 Carrageenan.

The food additive carrageenan may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the refined hydrocolloid prepared by aqueous extraction from the following members of the families Gigartinaceae and Solieriaceae of the class Rodophyceae (red seaweed):

Chondrus crispus.
Chondrus ocellatus.
Eucheuma cottonii.
Eucheuma spinosum.
Gigartina acicularis.
Gigartina pistillata.
Gigartina radula.
Gigartina stellata.

(b) The food additive conforms to the following conditions:

(1) It is a sulfated polysaccharide the dominant hexose units of which are galactose and anhydrogalactose.

(2) Range of sulfate content: 20 percent to 40 percent on a dry-weight basis.

(c) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(d) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the additive, carrageenan.

§ 121.1067 Salts of carrageenan.

The food additive salts of carrageenan may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive consists of carrageenan, meeting the provisions of § 121.1066, modified by increasing the concentration of one of the naturally occurring salts (ammonium, calcium, potassium, or sodium) of carrageenan to the level that it is the dominant salt in the additive.

(b) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the salt of carrageenan that dominates the mixture by reason of the modification, e.g. "sodium carrageenan," "potassium carrageenan," etc.

§ 121.1068 Furcelleran.

The food additive furcelleran may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the refined hydrocolloid prepared by aqueous extraction of furcellaria fastigiata of the class Rodophyceae (red seaweed).

(b) The food additive conforms to the following:

(1) It is a sulfated polysaccharide the dominant hexose units of which are galactose and anhydrogalactose.

(2) Range of sulfate content: 8 percent to 19 percent, on a dry-weight basis.

(c) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(d) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the additive, furcelleran.

§ 121.1069 Salts of furcelleran.

The food additive salts of furcelleran may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive consists of furcelleran, meeting the provisions of § 121.1068, modified by increasing the concentration of one of the naturally occurring salts (ammonium, calcium, potassium, or sodium) of furcelleran to the level that it is the dominant salt in the additive.

(b) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the salt of furcelleran that dominates the mixture by reason of the modification, e.g. "sodium furcelleran," "potassium furcelleran," etc.

§ 121.1070 Fatty acids.

The food additive fatty acids may be safely used in food and in the manufacture of food components in accordance with the following prescribed conditions:

(a) The food additive consists of one or any mixture of the following straight-chain monobasic carboxylic acids and their associated fatty acids manufactured from fats and oils derived from edible sources: Capric acid, caprylic acid, lauric acid, myristic acid, oleic acid, palmitic acid, and stearic acid.

(b) The food additive meets the following specifications:

(1) Unsaponifiable matter does not exceed 2 percent.

(2) It is free of chick-edema factor or other factors toxic to chicks, as evidenced during the bioassay method for determining the chick-edema factor as prescribed in paragraph (c) (2) of this section.

(c) For the purposes of this section:

(1) Unsaponifiable matter shall be determined by the method described in the most recent edition of "Official Methods of Analysis of the Association of Official Agricultural Chemists."

(2) Chick-edema factor shall be determined by the bioassay method described in the Journal of the Association of Official Agricultural Chemists, Volume 44, page 146 (1961), as modified by the methods described in Volume 45, page 210 (1962), and Volume 46, page 162 (1963).

(3) "Other factors toxic to chicks" referred to in paragraph (b) (2) of this section shall be determined during the course of the bioassay test described in subparagraph (2) of this paragraph, on the basis of chick deaths or other abnormalities not attributable to chick-edema factor or to the experimental conditions of the test.

(d) It is used or intended for use as follows:

(1) In foods as a lubricant, binder, and as a defoaming agent in accordance with good manufacturing practice.

(2) As a component in the manufacture of other food-grade additives.

(e) To assure safe use of the additive, the label and labeling of the additive and any premix thereof shall bear, in addition to the other information required by the act, the following:

(1) The common or usual name of the acid or acids contained therein.

(2) The words "food grade," in juxtaposition with and equally as prominent as the name of the acid.

§ 121.1071 Salts of fatty acids.

The food additive salts of fatty acids may be safely used in food and in the manufacture of food components in accordance with the following prescribed conditions:

(a) The additive consists of one or any mixture of two or more of the aluminum, calcium, magnesium, potassium, and sodium salts of the fatty acids conforming to § 121.1070.

(b) The food additive is used or intended for use as a binder, emulsifier, and anticaking agent in food in accordance with good manufacturing practice.

(c) To assure safe use of the additive, the label and labeling of the additive and any premix thereof shall bear, in addition to the other information required by the act, the following:

(1) The common or usual name of the fatty acid salt or salts contained therein.

(2) The words "food grade," in juxtaposition with and equally as prominent as the name of the salt.

§ 121.1072 Hydrogen cyanide.

The food additive hydrogen cyanide may be present as a residue in certain processed foods in accordance with the following prescribed conditions:

(a) The food additive is present as a result of its use as a fumigant.

(b) The residues of hydrogen cyanide shall not exceed the following levels:

(1) 125 parts per million in cereal flours.

(2) 90 parts per million in cereals that are cooked before being eaten.

(3) 50 parts per million in uncooked ham, bacon, and sausage.

(4) 200 parts per million in cocoa.

(c) Where tolerances are established under both sections 408 and 409 of the act on the raw agricultural commodity and on the processed food, respectively, the total residues of hydrogen cyanide in or on the processed food shall not be greater than that designated in paragraph (b) of this section.

(d) To assure safe use of the additive, the label and labeling of the pesticide formulation containing the food additive shall conform to the label and labeling registered by the United States Department of Agriculture.

§ 121.1073 Potassium iodide.

The food additive potassium iodide may be safely used in accordance with the following prescribed conditions:

(a) The food additive is used as a source of iodine in foods for special dietary use, when the food is marketed under labeling which provides that the maximum daily intake of the additive does not exceed 0.15 milligram of iodine.

(b) To assure safe use of the additive, in addition to the other information required by the act, the label of the additive shall bear:

(1) The name of the additive.

(2) A statement of the concentration of the additive in any mixture.

§ 121.1074 Piperonyl butoxide.

The food additive piperonyl butoxide may be safely used in accordance with the following prescribed conditions:

(a) It is used or intended for use in combination with pyrethrins for control of insects in cereal grain mills and in milled cereal grain products storage areas.

(b) It is used in combination with pyrethrins, whereby the amount of piperonyl butoxide is equal to 10 times the amount of pyrethrins in the formulation.

(c) A tolerance of 10 parts per million is established for residues of piperonyl butoxide in or on milling fractions derived from cereal grains, when present as a result of its use in cereal grain mills and milled grain products storage areas.

(d) To assure safe use of the additive, its label and labeling shall conform to that registered with the United States Department of Agriculture.

§ 121.1075 Pyrethrins.

The food additive pyrethrins may be safely used in accordance with the following prescribed conditions:

(a) It is used or intended for use in combination with piperonyl butoxide for the control of insects in cereal grain mills and milled cereal grain products storage areas.

(b) It is used in combination with piperonyl butoxide, whereby the amount of pyrethrins is equal to 10 percent of the amount of piperonyl butoxide in the formulation.

(c) A tolerance of 1 part per million is established for residues of pyrethrins in or on milling fractions derived from cereal grains, when present as a result of its use in cereal grain mills and milled cereal grain products storage areas.

(d) To assure safe use of the additive, its label and labeling shall conform to that registered with the United States Department of Agriculture.

§ 121.1076 Propylene oxide.

The food additive propylene oxide may be safely used in or on foods in accordance with the following prescribed conditions:

(a) It is intended as a package fumigant in or on dried prunes and glace fruit. It is also intended as a fumigant in or on bulk quantities of cocoa, gums, processed spices, starch, and processed nutmeats (except peanuts) when such bulk foods are to be further processed into a final food form.

(b) Except in the fumigation of packaged dried prunes and glacé fruit, it is applied in retorts not more than one time and not in excess of 4 hours' duration at a temperature not in excess of 125° F.

(c) When used as described in paragraphs (a) and (b) of this section, residues shall not exceed the following limitations:

Food	Limitations
	(Expressed as parts per million of propylene oxide except where noted)
Cocoa	300.
Glacé fruit	700 (as propylene glycol).
Gums	300.
Processed nutmeats (except peanuts).	300.
Prunes, dried	700 (as propylene glycol).
Spices, processed	300.
Starch	300.

(d) Propylene oxide for use as prescribed in this section will bear labeling meeting the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act.

§ 121.1077 Terpene resin.

The food additive terpene resin may be safely used in accordance with the following prescribed conditions:

(a) The food additive is the betapinene polymer obtained by polymerizing terpene hydrocarbons derived from wood. It has a softening point of 112° C.-118° C., as determined by ASTM method E-28-51T.

(b) It is used or intended for use as follows:

(1) As a moisture barrier on soft gelatin capsules in an amount not to exceed 0.07 percent of the weight of the capsule.

(2) As a moisture barrier on powders of ascorbic acid or its salts in an amount not to exceed 7 percent of the weight of the powder.

§ 121.1078 Ronnel.

A tolerance of zero is established for residues of ronnel (O,O-dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate) in milk from cows.

§ 121.1079 Paraformaldehyde.

The food additive paraformaldehyde may be safely used in accordance with the following prescribed conditions.

(a) It is used to control microbial or fungal growth in maple tree tapholes.

(b) It is so used that the maple sirup produced from the sap of treated maple trees does not contain in excess of 2 parts per million of formaldehyde.

§ 121.1080 Stearyl monoglyceridyl citrate.

The food additive stearyl monoglyceridyl citrate may be safely used in food in accordance with the following provisions:

(a) The additive is prepared by controlled chemical reaction of the following:

Reactant	*Limitation*
Citric acid	----------
Monoglycerides of fatty acids.	Prepared by the glycerolysis of edible fats and oils or derived from fatty acids conforming with § 121.1070.
Stearyl alcohol	Derived from fatty acids conforming with § 121.1070.

(b) The additive stearyl monoglyceridyl citrate, produced as described under paragraph (a) of this section, meets the following specifications:

Acid number	40 to 52.
Total citric acid	15 to 18 percent.
Saponification number	215-255.

(c) The additive is used or intended for use as an emulsion stabilizer in or with shortenings containing emulsifiers.

§ 121.1081 Quinine.

Quinine, as the hydrochloride salt or sulfate salt, may be safely used in food in accordance with the following conditions:

Uses	*Limitations*
In carbonated beverages as a flavor.	Not to exceed 83 parts per million, as quinine. Label shall bear a prominent declaration of the presence of quinine either by the use of the word "quinine" in the name of the article or through a separate declaration.

§ 121.1082 Modified hop extract.

The food additive modified hop extract may be safely used in beer in accordance with the following prescribed conditions:

(a) The food additive is used or intended for use as a flavoring agent in the brewing of beer.

(b) The food additive is manufactured from a hexane extract of hops by simultaneous isomerization and selective reduction in an alkaline aqueous medium with sodium borohydride, whereby the additive meets the following specifications:

(1) A solution of the food additive solids is made up in approximately 0.012 *n* alkaline methyl alcohol (6 milliliters of 1 *n* sodium hydroxide diluted to 500 milliliters with methyl alcohol) to show an absorbance at 253 millimicrons of 0.6 to 0.9 per centimeter. (This absorbance is obtained by approximately 0.03 milligram solids per milliliter.) The ultraviolet absorption spectrum of this solution exhibits the following characteristics:

(i) An absorption peak at 253 millimicrons.

(ii) No absorption peak at 325 to 330 millimicrons.

(iii) The absorbance at 268 millimicrons does not exceed the absorbance at 272 millimicrons.

(2) The boron content of the food additive does not exceed 310 parts per million, calculated as boron.

§ 121.1083 Methyl chloride.

The food additive methyl chloride may be safely used in accordance with the following prescribed conditions:

(a) It is used or intended for use as a propellant in pesticide formulations in an amount not to exceed 30 percent of the finished formulation.

(b) It is used or intended for use in food storage and processing areas whereby spray applications do not contact fatty foods.

(c) To assure safe use of the additive, the label and labeling of the pesticide formulation containing the food additive shall conform to the label and labeling registered by the United States Department of Agriculture.

§ 121.1084 Glycerol ester of wood rosin.

Glycerol ester of wood rosin may be safely used in food in accordance with the following prescribed conditions:

(a) It has an acid number of 5 to 9, a drop-softening point of 88° C. to 96° C.; a color of N or paler as determined in accordance with Official Naval Stores Standards of the United States; and is purified by countercurrent steam distillation.

(b) It is used to adjust the density of citrus oils used in the preparation of beverages.

§ 121.1085 Azodicarbonamide.

The food additive azodicarbonamide may be safely used in food in accordance with the following prescribed conditions:

(a) It is used or intended for use as an aging and bleaching ingredient in cereal flour.

(b) It is used in an amount not to exceed 2.04 grams per hundred pounds of flour (45 parts per million).

(c) To assure safe use of the additive:

(1) The label and labeling of the additive and any intermediate premix prepared therefrom shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive.

(ii) A statement of the concentration or the strength of the additive in any intermediate premixes.

(2) The label or labeling of the food additive shall also bear adequate directions for use.

§ 121.1086 Sugar beet extract flavor base.

Sugar beet extract flavor base may be safely used in food in accordance with the provisions of this section.

(a) Sugar beet extract flavor base is the concentrated residue of soluble sugar beet extractives from which sugar and glutamic acid have been recovered, and which has been subjected to ion exchange to minimize the concentration of naturally occurring trace minerals.

(b) It is used as a flavor in food.

§ 121.1087 Ethyl cellulose.

The food additive ethyl cellulose may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is a cellulose ether containing ethoxy (OC_2H_5) groups attached by an ether linkage and containing on an anhydrous basis not more than 2.6 ethoxy groups per anhydroglucose unit.

(b) It is used or intended for use as follows:

(1) As a binder and filler in dry vitamin preparations.

(2) As a component of protective coatings for vitamin and mineral tablets.

(3) As a fixative in flavoring compounds.

§ 121.1088 Boiler water additives.

Boiler water additives may be safely used in the preparation of steam that will contact food, under the following conditions:

(a) The amount of additive is not in excess of that required for its functional purpose, and the amount of steam in contact with food does not exceed that required to produce the intended effect in or on the food.

(b) The compounds are prepared from substances identified in paragraphs (c) and (d) of this section, and are subject to the limitations, if any, prescribed:

(c) List of substances:

	Limitations
Ammonium alginate	
Cobalt sulfate (as catalyst)	
Lignosulfonic acid	
Monobutyl ether of polyoxyethylene glycol.	Minimum mol. wt. 1,500.
Monobutyl ether of polyoxypropylene glycol.	Do.
Polyoxyethylene glycol	Minimum mol. wt. 1,000.
Polyoxypropylene glycol	Do.
Potassium carbonate	
Sodium acetate	
Sodium alginate	
Sodium aluminate	
Sodium carbonate	
Sodium hexametaphosphate	
Sodium humate	
Sodium hydroxide	
Sodium lignosulfonate	
Sodium metasilicate	
Sodium nitrate	
Sodium phosphate (mono-, di-,tri-).	
Sodium polyacrylate	
Sodium silicate	
Sodium sulfate	
Sodium sulfite (neutral or alkaline).	
Sodium tripolyphosphate	
Tannin (including quebracho extract).	
Tetrasodium EDTA	
Tetrasodium pyrophosphate	

(d) Substances used alone or in combination with substances in paragraph (c) of this section:

	Limitations
Cyclohexylamine	Not to exceed 10 parts per million in steam, and excluding use of such steam in contact with milk and milk products.
Hydrazine	Zero in steam.
Morpholine	Not to exceed 10 parts per million in steam, and excluding use of such steam in contact with milk and milk products.
Octadecylamine	Not to exceed 3 parts per million in steam, and excluding use of such steam in contact with milk and milk products.

§ 121.1089 Dehydroacetic acid.

The food additive dehydroacetic acid and/or its sodium salt may be safely used in accordance with the following prescribed conditions:

(a) The food additive meets the following specifications:

Dehydroacetic acid: Melting point, 109° C.-111° C.; assay, minimum 98 percent (dry basis).

Sodium salt of dehydroacetic acid: Assay, minimum 98 percent (dry basis).

(b) It is used or intended for use as a preservative for cut or peeled squash, and is so used that no more than 65 parts per million expressed as dehydroacetic acid remains in or on the prepared squash.

(c) The label or labeling of any package of the additive intended for use in food shall bear adequate directions for use to insure compliance with this section.

§ 121.1090 Disodium inosinate.

The food additive disodium inosinate may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the disodium salt of inosinic acid, manufactured and purified so as to contain no more than 150 parts per million of soluble barium in the compound disodium inosinate with seven and one-half molecules of water of crystallization.

(b) The food additive is used as a flavoring adjuvant in food.

§ 121.1091 Chemicals used in washing fruits and vegetables.

Chemicals may be safely used to wash fruits and vegetables in accordance with the following conditions:

(a) The chemicals consist of one or more of the following:

(1) Substances generally recognized as safe in food or covered by prior sanctions for use in washing fruits and vegetables.

(2) Substances identified in this subparagraph and subject to such limitations as are provided:

Substances	Limitations
Polyacrylamide	Not to exceed 10 p.p.m. in wash water. Contains not more than 0.2 percent acrylamide monomer.
Potassium bromide	
Sodium dodecylbenzenesulfonate (alkyl group predominantly C_{12} and not less than 95% C_{10} to C_{16}).	Not to exceed 0.2% in wash water. May be used in the washing or to assist in the lye peeling of fruits and vegetables.
Sodium hypochlorite	

(b) The chemicals are used in amounts not in excess of the minimum required to accomplish their intended effect.

(c) The use of the chemicals is followed by rinsing with potable water to remove, to the extent possible, residues of the chemicals.

(d) To assure safe use of the additive:

(1) The label and labeling of the additive container shall bear, in addition to the other information required by the act, the name of the additive or a statement of its composition.

(2) The label or labeling of the additive container shall bear adequate use

directions to assure use in compliance with all provisions of this section.

§ 121.1092 Acrylamide-acrylic acid resin.

Acrylamide-acrylic acid resin (hydrolyzed polyacrylamide) may be safely used in accordance with the following prescribed conditions.

(a) Acrylamide-acrylic acid resin is produced by the polymerization of acrylamide with partial hydrolysis, or by copolymerization of acrylamide and acrylic acid, with the greater part of the polymer being composed of acrylamide units.

(b) The acrylamide-acrylic acid resin contains not more than 0.05 percent of residual acrylamide.

(c) The acrylamide-acrylic acid resin is used as a flocculent in the clarification of beet sugar juice or cane sugar juice in an amount not to exceed 5 parts per million by weight of the juice.

§ 121.1093 DDT.

Tolerances of 100 parts per million are established for residues of DDT (a mixture of 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl) ethane and 1,1,1-trichloro-2-(*o*-chlorophenyl) - 2 -(*p*-chlorophenyl) ethane) in or on peppermint oil and spearmint oil, when present therein as a result of the application of this insecticide to the growing peppermint and spearmint crops.

§ 121.1094 Furaltadone.

A tolerance of zero is established for residues of furaltadone in milk of dairy cows resulting from use of the additive as an intramammary infusion not less than 48 hours before milk is taken for consumption.

§ 121.1095 Nicotinamide-ascorbic acid complex.

Nicotinamide-ascorbic acid complex may be safely used in accordance with the following prescribed conditions:

(a) The additive is the product of the controlled reaction between ascorbic acid and nicotinamide, melting in the range 141° C. to 145° C.

(b) It is used as a source of ascorbic acid and nicotinamide in multivitamin preparations.

§ 121.1096 Ethyl formate.

The food additive ethyl formate may be safely used in or on specified dried fruits in accordance with the following prescribed conditions:

(a) It is used or intended for use in or on raisins and dried Zante currants as a bulk and package fumigant.

(b) It is used in accordance with directions registered with the United States Department of Agriculture, and so used that the total formic acid present, free and combined, in the finished product shall not exceed 250 parts per million.

(c) To assure safe use of the additive, its label and labeling shall conform to that registered with the United States Department of Agriculture.

§ 121.1097 Safrole-free extract of sassafras.

The food additive safrole-free extract of sassafras may be safely used in accordance with the following prescribed conditions:

(a) The additive is the aqueous extract obtained from the root bark of the plant *Sassafras albidum* (Nuttall) Nees (Fam. *Lauraceae*).

(b) It is obtained by extracting the bark with dilute alcohol, first concentrating the alcoholic solution by vacuum distillation, then diluting the concentrate with water and discarding the oily fraction.

(c) The purified aqueous extract is safrole-free.

(d) It is used as a flavoring in food.

§ 121.1098 Rice bran wax.

Rice bran wax may be safely used in food in accordance with the following conditions:

(a) It is the refined wax obtained from rice bran and meets the following specifications:

Melting point 75° C. to 80° C.
Free fatty acids, maximum 10 percent.
Iodine number, maximum 20.
Saponification number 75 to 120.

(b) It is used or intended for use as follows:

Food	Limitation in food	Use
Candy	50 parts per million.	Coating.
Fresh fruits and fresh vegetables.	do	Do.
Chewing gum	2½ percent	Plasticizing material.

§ 121.1099 Defoaming agents.

Defoaming agents may be safely used in processing foods, in accordance with the following conditions:

(a) They consist of one or more of the following:

(1) Substances generally recognized by qualified experts as safe in food or covered by prior sanctions for the use prescribed by this section.

(2) Substances listed in this subparagraph, subject to any limitations imposed:

Substances	Limitations
Dimethylpolysiloxane (substantially free from hydrolyzable chloride and alkoxy groups, no more than 18 percent loss in weight after heating 4 hr. at 200° C.; viscosity 300 centistokes, 600 centistokes at 25° C., refractive index 1.400-1.404 at 25° C.).	10 p.p.m. in food; except zero in milk and zero in food for infants and invalids.
Formaldehyde	As a preservative in defoaming agents containing dimethylpolysiloxane, in an amount not exceeding 1.0 percent of the dimethylpolysiloxane content.
Polyoxyethylene 40 monostearate	As defined in U.S.P. XVI.
Polyoxyethylene (20) sorbitan monostearate.	As defined in § 121.1030.
Polyoxyethylene (20) sorbitan tristearate.	As defined in § 121.1008.
Propylene glycol alginate	As defined in § 121.1015.
Silicon dioxide	As defined in § 121.1058.
Sorbitan monostearate	As defined in § 121.1029.

(3) Substances listed in this subparagraph, provided they are components of defoaming agents limited to use in processing beet sugar and yeast, and subject to any limitations imposed:

Substances	Limitations
Aluminum stearate	As defined in § 121.1071.
Butyl stearate	
BHA	As an antioxidant, not to exceed 0.1 percent by weight of defoamer.
BHT	As an antioxidant, not to exceed 0.1 percent by weight of defoamer.
Calcium stearate	As defined in § 121.1071.
Fatty acids	As defined in § 121.1070.
Formaldehyde	As a preservative.
Hydroxylated lecithin	As defined in § 121.1027.
Isopropyl alcohol	
Magnesium stearate	As defined in § 121.1071.
Mineral oil: Conforming with § 121.1146.	Not more than 150 p.p.m. in yeast, measured as hydrocarbons.
Odorless light petroleum hydrocarbons: Conforming with § 121.1182.	
Petrolatum: Conforming with § 121.1166.	
Petroleum wax: Conforming with § 121.1156.	
Synthetic isoparaffinic petroleum hydrocarbons: Conforming with § 121.1154.	
Oxystearin	As defined in § 121.1016.
Polyethylene glycol	Molecular weight range, 400-2,000.
Polyoxyethylene (600) dioleate	
Polyoxyethylene (600) monoricinoleate	
Polypropylene glycol	Molecular weight range, 1,200-2,500.
Polysorbate 80	As defined in § 121.1009.
Potassium stearate	As defined in § 121.1071.
Propylene glycol mono- and diesters of fats and fatty acids.	As defined in § 121.1113.
Soybean oil fatty acids, hydroxylated.	
Tallow, hydrogenated, oxidized or sulfated.	
Tallow alcohol, hydrogenated	

(b) They are added in an amount not in excess of that reasonably required to inhibit foaming.

§ 121.1100 Iron-choline citrate complex.

Iron-choline citrate complex made by reacting approximately equimolecular quantities of ferric hydroxide, choline, and citric acid may be safely used as a source of iron in foods for special dietary use.

§ 121.1101 Sperm oil, hydrogenated.

The food additive hydrogenated sperm oil may be safely used in accordance with the following prescribed conditions:

(a) The sperm oil is derived from rendering the fatty tissue of the sperm whale or is prepared by synthesis of fatty acids and fatty alcohols derived from the sperm whale. The sperm oil obtained by rendering is refined. The oil is hydrogenated.

(b) It is used alone or as a component of a release agent or lubricant in bakery pans.

(c) The amount used does not exceed that reasonably required to accomplish the intended lubricating effect.

§ 121.1102 Calcium lignosulfonate.

Calcium lignosulfonate may be safely used in or on food, subject to the provisions of this section.

(a) Calcium lignosulfonate consists of sulfonated lignin, primarily as calcium and sodium salts.

(b) It is used in an amount not to exceed that reasonably required to accomplish the intended physical or technical effect when added as a dispersing agent and stabilizer in pesticides for preharvest or postharvest application to bananas.

§ 121.1103 Nihydrazone.

A tolerance of zero is established for residues of the food additive nihydrazone (5-nitro-2-furaldehyde acetylhydrazone) in the uncooked, edible tissues, byproducts, and eggs of chickens.

§ 121.1104 Neomycin.

A tolerance of zero is established for residues of neomycin in the uncooked edible tissues of calves.

§ 121.1105 Morpholine.

Morpholine may be safely used as a component of food, subject to the following restrictions.

(a) It is used as the salt(s) of one or more of the fatty acids meeting the requirements of § 121.1070, as a component of protective coatings applied to fresh fruits and vegetables.

(b) It is used at a level not in excess of that reasonably required to produce its intended effect.

§ 121.1106 Ethopabate.

A tolerance of zero is established for residues of ethopabate (methyl-4-acetamido-2-ethoxy benzoate) in edible tissues of chickens.

§ 121.1107 Bithionol.

A tolerance of zero is established for residues of the food additive bithionol (2,2′-thiobis(4,6-dichlorothenol)) in the uncooked edible tissues and byproducts of chickens.

§ 121.1108 Methiotriazamine.

A tolerance of zero is established for residues of the food additive methiotriazamine (4,6-diamino-1-(4-methylmercaptophenyl)-1,2-dihydro-2,2-dimethyl-1,3,5-triazine hydrochloride) in the uncooked edible tissues and byproducts of chickens.

§ 121.1109 Disodium guanylate.

Disodium guanylate may be safely used as a flavor enhancer in foods, at a level not in excess of that reasonably required to produce the intended effect.

§ 121.1110 Polyvinylpolypyrrolidone.

The food additive polyvinylpolypyrrolidone may be safely used in accordance with the following prescribed conditions:

(a) The additive is a homopolymer of purified vinylpyrrolidone catalytically produced under conditions producing polymerization and cross-linking such that an insoluble polymer is produced.

(b) The food additive is so processed that when the finished polymer is refluxed for 3 hours with water, 5 percent acetic acid, and 50 percent alcohol, no more than 50 parts per million of extractables is obtained with each solvent.

(c) It is used or intended for use as a clarifying agent in beverages and vinegar, followed by removal with filtration.

§ 121.1111 Synthetic glycerin produced by the hydrogenolysis of carbohydrates.

Synthetic glycerin produced by the hydrogenolysis of carbohydrates may be safely used in food, subject to the provisions of this section:

(a) It shall contain not in excess of 0.2 percent by weight of a mixture of butanetriols.

(b) It is used or intended for use in an amount not to exceed that reasonably required to produce its intended effect.

§ 121.1112 Methyl ethyl cellulose.

The food additive methyl ethyl cellulose may be safely used in food in accordance with the following prescribed conditions.

(a) The additive is a cellulose ether having the general formula $[C_6H_{(10-x-y)}O_5(CH_3)_x(C_2H_5)_y]_n$, where x is the number of methyl groups and y is the number of ethyl groups. The average value of x is 0.3 and the average value of y is 0.7.

(b) The additive meets the following specifications:

(1) The methoxy content shall be not less than 3.5 percent and not more than 6.5 percent, calculated as OCH_3, and the ethoxy content shall be not less than 14.5 percent and not more than 19 percent, calculated as OC_2H_5, both measured on the dry sample.

(2) The viscosity of an aqueous solution, 2.5 grams of the material in 100 milliliters of water, at 20° C., is 20 to 60 centipoises.

(3) The ash content on a dry basis has a maximum of 0.6 percent.

(c) The food additive is used as an aerating, emulsifying, and foaming agent, in an amount not in excess of that reasonably required to produce its intended effect.

§ 121.1113 Propylene glycol mono- and diesters of fats and fatty acids.

Propylene glycol mono- and diesters of fats and fatty acids may be safely used in food, subject to the following prescribed conditions:

(a) They are produced from edible fats and/or fatty acids in compliance with § 121.1070.

(b) They are used in food in amounts not in excess of that reasonably required to produce their intended effect.

§ 121.1114 Xylitol.

Xylitol may be safely used in foods for special dietary uses, provided the amount used is not greater than that required to produce its intended effect.

§ 121.1115 Mannitol.

The food additive mannitol may be safely used in food, provided that the amount used does not exceed that reasonably required to accomplish the intended physical or technical effect.

§ 121.1116 THBP.

The food additive THBP (2,4,5-trihydroxybutyrophenone) may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive has a melting point of 149° C.—153° C.

(b) It is used as an antioxidant alone or in combination with other permitted antioxidants.

(c) The total antioxidant content of a food containing the additive will not exceed 0.02 percent of the oil or fat content of the food, including the essential (volatile) oil content of the food.

§ 121.1117 Diethyl pyrocarbonate.

The food additive diethyl pyrocarbonate may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is manufactured to a purity of at least 98 percent by one of the methods described in this paragraph.

(1) By the controlled reaction of sodium ethylate with carbon dioxide to obtain sodium ethyl carbonate which is subsequently reacted with ethyl chloroformate.

(2) By the reaction of sodium hydroxide and ethyl chloroformate in the presence of a catalyst produced by the reaction of *N*-methyl-*n*-stearylamine with propylene oxide. The amount of the catalyst remaining in the diethyl pyrocarbonate does not exceed 425 parts per million as determined by Kjeldahl nitrogen assay.

(b) It is used or intended for use as a fermentation inhibitor in still wines to be added before or during bottling at a level not exceeding 200 parts per million.

(c) The treated wine shall contain no diethyl pyrocarbonate when tested after 5 days following the date of bottling.

§ 121.1118 Diethylstilbestrol.

A tolerance of zero is established for residues of diethylstilbestrol in the edible portions of beef cattle and sheep after slaughter as determined by the methods of examination prescribed in § 121.241.

§ 121.1119 Polyacrylamide.

Polyacrylamide containing not more than 0.2 percent of acrylamide monomer may be safely used as a film former in the imprinting of soft-shell gelatin capsules when the amount used is not in excess of the minimum required to produce the intended effect.

§ 121.1120 Polyglycerol esters of fatty acids.

Polyglycerol esters of fatty acids, up to and including the decaglycerol esters, may be safely used in food in accordance with the following prescribed conditions:

(a) They are prepared from the following edible fats and oils, and the fatty acids derived therefrom (hydrogenated and nonhydrogenated, meeting the requirements of § 121.1070(b)): Corn oil, cottonseed oil, lard, palm oil from fruit, peanut oil, safflower oil, sesame oil, soybean oil, and tallow.

(b) They are used as emulsifiers in food, in amounts not greater than that required to produce the intended physical or technical effect.

(c) Polyglycerol esters of a mixture of stearic, oleic, and coconut fatty acids are used as a cloud inhibitor in vegetable and salad oils when use is not precluded by standards of identity. The fatty acids used in the production of the polyglycerol esters meet the requirements of § 121.1070(b), and the polyglycerol esters is used at a level not in excess of the amount required to perform its cloud-inhibiting effect.

§ 121.1121 Polyethylene glycol minimum molecular weight 1,300.

Polyethylene glycol having a minimum molecular weight of 1,300 may be safely used in food in accordance with the following conditions:

(a) It is used as a coating on sodium nitrite to inhibit the hygroscopic property of sodium nitrite.

(b) It is used in an amount not in excess of that required to produce its intended effect.

§ 121.1122 Nickel sulfate.

A tolerance of 175 parts per million is established for residues of nickel sulfate (calculated as Ni) in the bran of wheat and oats to be ingested as food or to be converted to food. Such residues may be present therein only as a result of the application of a fungicide containing 19 percent anhydrous nickel sulfate and 53 percent maneb to the growing crops treated under an experimental permit issued by the U.S. Department of Agriculture, which expires February 15, 1966, and on which crops temporary pesticide tolerances for nickel sulfate and maneb expiring the same date have been established. No food additive tolerance is necessary for residues of maneb in bran, since the level of residues in the bran is less than the tolerance level for the grain.

§ 121.1123 D-Pantothenamide.

The food additive D-pantothenamide as a source of pantothenic acid activity, may be safely used in foods for special dietary use in an amount not in excess of that reasonably required to produce its intended effect.

§ 121.1124 Sulfamethazine.

The tolerance of zero is established for residues of the food additive sulfamethazine in the uncooked edible tissues of calves and swine.

§ 121.1125 Dried yeasts.

Dried yeast (*Saccharomyces cerevisiae* and *Saccharomyces fragilis*) and dried torula yeast (*Candida utilis*) may be safely used in food provided the total folic acid content of the yeast does not exceed 0.04 milligram per gram of yeast (approximately 0.008 milligram of pteroylglutamic acid per gram of yeast).

§ 121.1126 Ethion.

A tolerance of 4 parts per million is established for residues of the insecticide ethion (*O,O,O′, O′*-tetraethyl *S,S′*-methylene bisphosphorodithioate) in raisins when present therein as a result of its application to the growing agricultural crop grapes.

§ 121.1127 Progesterone.

(a) A tolerance of zero is established for residues of progesterone in the uncooked edible tissues and byproducts of lambs and steers.

(b) The method of examination prescribed for the quantitative determination of progesterone is as follows: Prepare an extractive of the tissues as described in this paragraph, and bioassay the extractive in a vegetable oil vehicle by the method of Hooker and Forbes, published in Endocrinology, volume 41, page 158 (1947).

(1) Extraction procedure for liver, lean meat, and kidney tissue:

(i) Extract 1 kilogram of finely minced tissue with 20 volumes of a mixture of chloroform:methyl alcohol::2:1 in a tissue homogenizer.

(ii) Separate the insoluble material by filtration with suction and reextract with two volumes of the chloroform-methyl alcohol mixture.

(iii) Again separate the insoluble material, and extract it with one-fifth volume of water. Separate the water from the insoluble material and extract the water two times with two volumes of chloroform.

(iv) Combine the chloroform-methyl alcohol and the chloroform extractives from subdivisions (i), (ii), and (iii) of this subparagraph and evaporate to dryness in vacuum under a stream of nitrogen. Redissolve the residue in chloroform-methyl alcohol mixture separate any insoluble protein, and again evaporate to dryness in vacuum under a stream of nitrogen.

(v) Dissolve the residue from subdivision (iv) of this subparagraph in three volumes of petroleum ether, and extract four times with equal volumes of fresh portions of 70 percent methyl alcohol in water. Combine the 70 percent methyl alcohol extractives, and wash the methyl alcohol solution with one-fourth volume of petroleum ether. Discard the petroleum ether.

(vi) Concentrate the aqueous methyl alcohol solution from subdivision (v) of this subparagraph under vacuum to remove the methyl alcohol, and extract the aqueous solution four times with equal volumes of ethyl ether.

(vii) Combine the ethyl ether extractives, and evaporate to dryness. The residue is dissolved in a suitable amount of solvent for bioassay.

(2) Extraction procedure for fatty tissue:

(i) Extract 1 kilogram of finely minced tissue two times with five volumes of a mixture of hexane:benzene::1:1 and one time with one volume of the same solvent.

(ii) Combine hexane-benzene extractives and evaporate to dryness.

(iii) Dissolve the residue from subdivision (ii) of this subparagraph in 12 liters of petroleum ether and extract five times with ½-liter of 70 percent ethyl alcohol in water. Combine the 70 percent ethyl alcohol extractive, and concentrate by evaporation to remove most of the ethyl alcohol. Discard the petroleum ether.

(iv) Extract the aqueous solution from subdivision (iii) of this subparagraph four times with one-half volume of ethyl ether.

(v) Combine the ethyl ether extracts and evaporate to dryness. The residue is dissolved in a suitable amount of solvent for bioassay.

§ 121.1128 Estradiol benzoate.

(a) A tolerance of zero is established for residues of estradiol benzoate in the uncooked edible tissues and byproducts of heifers, lambs, and steers.

(b) The method of examination prescribed for the quantitative determination of estradiol benzoate is as follows: Incorporate the finely ground tissues in the diet of immature mice, and assay by the mouse uterine weight method of E. J. Umberger, G. H. Gass, and J. M. Curtis, published in Endocrinology, volume 63, page 806 (1958).

§ 121.1129 Testosterone propionate.

(a) A tolerance of zero is established for residues of testosterone propionate in the uncooked edible tissues and byproducts of heifers.

(b) The method of examination prescribed for the quantitative determination of testosterone propionate is as follows: Prepare an extract of the tissues as described in § 121.1127(b) (1) and (2), and bioassay the extractive in an ethyl alcohol vehicle by inunction on the day-old chick's comb by the method published in Methods in Hormone Research, New York, Academic Press, volume II, page 286 (1962).

§ 121.1130 Fumaric acid and salts of fumaric acid.

Fumaric acid and its calcium, ferrous, magnesium, potassium, and sodium salts may be safely used in food in accordance with the following prescribed conditions:

(a) The additives meet the following specifications:

(1) Fumaric acid contains a minimum of 99.5 percent by weight of fumaric acid, calculated on the anhydrous basis.

(2) The calcium, magnesium, potassium, and sodium salts contain a minimum of 99 percent by weight of the respective salt, calculated on the anhydrous basis. Ferrous fumarate contains a minimum of 31.3 percent total iron and not more than 2 percent ferric iron.

(b) With the exception of ferrous fumarate, fumaric acid and the named salts are used singly or in combination in food at a level not in excess of the amount reasonably required to accomplish the intended effect.

(c) Ferrous fumarate is used as a source of iron in foods for special dietary use, when the use is consistent with good nutrition practice.

§ 121.1131 Chlorobutanol.

A tolerance of zero is established for residues of chlorobutanol in milk from dairy animals.

§ 121.1132 Potassium nitrate.

The food additive potassium nitrate may be safely used as a curing agent in the processing of cod roe, in an amount not to exceed 200 parts per million of the finished roe.

§ 121.1133 Fumigants for grain-mill machinery.

Fumigants may be safely used in or on grain-mill machinery in accordance with the following prescribed conditions:

(a) The fumigants consist of one or more of the following: Carbon disulfide, carbon tetrachloride, ethylene dibromide, ethylene dichloride, methyl bromide.

(b) To assure safe use of the fumigant, its label and labeling shall conform to the label and labeling registered by the United States Department of Agriculture.

(c) Residues of inorganic bromide (calculated as Br) from all fumigation sources shall not exceed 50 parts per million in the milled fractions derived from cereal grain.

§ 121.1134 Pteroylglutamic acid.

Pteroylglutamic acid, a form of folic acid, may be safely used for its vitamin property in foods for special dietary use, provided the directions for use are such that, when followed, daily ingestion will not exceed 0.1 milligram of the additive.

§ 121.1135 Calcium silicate.

Calcium silicate, including synthetic calcium silicate, may be safely used in food in accordance with the following prescribed conditions:

(a) It is used as an anticaking agent in food in an amount not in excess of that reasonably required to produce its intended effect, and subject to the following limitations:

(1) It is not to be used in infant foods and foods for special dietary use, except when present as an anticaking agent at a level not to exceed 2 percent in salt and salt substitutes used as components of these foods.

(2) It will not exceed 2 percent by weight of the food, except that it may be present up to 5 percent by weight of baking powder.

§ 121.1136 Methacrylic acid-divinylbenzene copolymer.

Methacrylic acid-divinylbenzene copolymer may be safely used in food in accordance with the following prescribed conditions:

(a) The additive is produced by the polymerization of methacrylic acid and divinylbenzene. The divinylbenzene functions as a cross-linking agent and constitutes a minimum of 5 percent of the polymer.

(b) Aqueous extractives from the additive do not exceed 0.2 percent (dry basis) after 24 hours at 25° C.

(c) The additive is used as a carrier of vitamin B_{12} in foods for special dietary use.

§ 121.1137 Dioctyl sodium sulfosuccinate.

Dioctyl sodium sulfosuccinate which meets the specifications of The National Formulary may be safely used:

(a) As a wetting agent in fumaric acid-acidulated dry beverage base and in fumaric acid-acidulated fruit juice drinks, when standards of identity do not preclude such use, and when the labeling of the dry beverage base bears adequate directions for use and the additive is used in such an amount that the finished beverage or fruit juice drink will contain not in excess of 10 parts per million of the additive.

(b) As a processing aid in the manufacture of unrefined sugar from sugar juices, sirups, and massecuite derived from sugarcane and sugar beets when used in an amount not in excess of 0.5 part per million of the additive per percentage point of sucrose in the juice, sirup, or massecuite being processed.

(c) As a solubilizing agent on gums and hydrophilic colloids to be used in food as stabilizing and thickening agents, when standards of identity do not preclude such use. The additive is used in an amount not to exceed 0.5 percent by weight of the gums or hydrophilic colloids.

§ 121.1138 Arsenic.

Tolerances for total residues of combined arsenic (calculated as As) in chicken and turkey tissues and byproducts are established as follows:

0.5 part per million in muscle meat.
1 part per million in edible byproducts.
0.5 part per million in eggs.

§ 121.1139 Polyvinylpyrrolidone.

The food additive polyvinylpyrrolidone may be safely used in accordance with the following prescribed conditions:

(a) The additive is a polymer of purified vinylpyrrolidone catalytically produced, having an average molecular weight of 40,000 and a maximum unsaturation of 1 percent, calculated as the monomer, except that the polyvinylpyrrolidone used in beer is that having an average molecular weight of 360,000 and a maximum unsaturation of 1 percent, calculated as the monomer.

(b) The additive is used or intended for use in foods as follows:

Food	*Limitations*
Beer	As a clarifying agent, at a residual level not to exceed 10 parts per million.
Flavor concentrates in tablet form	As a tableting adjuvant in an amount not to exceed good manufacturing practice.
Nonnutritive sweeteners in concentrated liquid form.	As a stabilizer, bodying agent, and dispersant, in an amount not to exceed good manufacturing practice.
Nonnutritive sweeteners in tablet form.	As a tableting adjuvant in an amount not to exceed good manufacturing practice.
Vitamin and mineral concentrates in liquid form.	As a stabilizer, bodying agent, and dispersant, in an amount not to exceed good manufacturing practice.
Vitamin and mineral concentrates in tablet form.	As a tableting adjuvant in an amount not to exceed good manufacturing practice.
Vinegar	As a clarifying agent, at a residual level not to exceed 40 parts per million.

§ 121.1140 Salicylic acid.

A tolerance of zero is established for residues of salicylic acid in milk from dairy animals.

§ 121.1141 Aluminum nicotinate.

Aluminum nicotinate may be safely used as a source of niacin in foods for special dietary use. A statement of the concentration of the additive, expressed as niacin, shall appear on the label of the food additive container or on that of any intermediate premix prepared therefrom.

§ 121.1142 Cobaltous salts.

Cobaltous salts may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive shall consist of one of the following: Cobaltous sulfate, cobaltous chloride, or cobaltous acetate.

(b) The salt is used to provide cobalt in an amount not to exceed 1.5 parts per million (calculated as cobalt) in fermented malt beverages.

(c) The food additive is used or intended for use in fermented malt beverages to improve foam stability and to prevent gushing.

(d) To assure safe use of the additive, in addition to the other information required by the act:

(1) The label of the additive and any intermediate mix shall bear:

(i) The name of the additive.

(ii) A statement of the concentration of the additive in any intermediate mix.

(2) The label or labeling of the additive shall bear adequate directions to provide a final food that complies with the limitations prescribed in paragraph (b) of this section.

§ 121.1143 Erythromycin.

A tolerance of zero is established for residues of erythromycin in the uncooked edible tissues and byproducts of chickens.

§ 121.1144 [Reserved]

§ 121.1145 Furazolidone.

A tolerance of zero is established for residues of furazolidone in the edible portions of swine after slaughter.

§ 121.1146 White mineral oil.

White mineral oil may be safely used in food in accordance with the following conditions:

(a) White mineral oil is a mixture of liquid hydrocarbons, essentially paraffinic and naphthenic in nature obtained from petroleum. It is refined to meet the following specifications:

(1) It meets the test requirements of U.S.P. XVII for readily carbonizable substances (page 518).

(2) It meets the test requirements of U.S.P. XVII for sulfur compounds (page 518).

(3) It meets the specifications prescribed in the Journal of the Association of Official Agricultural Chemists, Volume 45, page 66 (1962) after correction of the ultraviolet absorbance for any absorbance due to added antioxidants.

(b) White mineral oil may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the act, in an amount not greater that that required to produce its intended effect.

(c) White mineral oil is used or intended for use as follows:

Use	*Limitation (inclusive of all petroleum hydrocarbons that may be used in combination with white mineral oil)*
1. As a release agent, binder, and lubricant in or on capsules and tablets containing concentrates of flavoring, spices, condiments, and nutrients intended for addition to food, excluding confectionery.	Not to exceed 0.6% of the capsule or tablet.
2. As a release agent, binder, and lubricant in or on capsules and tablets containing foods for special dietary use.	Do.
3. As a float on fermentation fluids in the manufacture of vinegar and wine to prevent or retard access of air, evaporation, and wild yeast contamination during fermentation.	In an amount not to exceed good manufacturing practice.
4. As a defoamer in food	In accordance with § 121.1099.
5. In bakery products, as a release agent and lubricant	Not to exceed 0.15% of bakery products.
6. In dehydrated fruits and vegetables, as a release agent.	Not to exceed 0.02% of dehydrated fruits and vegetables.
7. In egg white solids, as a release agent	Not to exceed 0.1% of egg white solids.
8. On raw fruits and vegetables, as a protective coating	In an amount not to exceed good manufacturing practice.
9. In frozen meat, as a component of a hot-melt coating	Not to exceed 0.095% of meat.
10. As a protective float on brine used in the curing of pickles	In an amount not to exceed good manufacturing practice.

§ 121.1147 Prednisolone.

A tolerance of zero is established for residues of prednisolone in milk from dairy animals.

§ 121.1148 Ion-exchange resins.

Ion-exchange resins may be safely used in the treatment of food under the following prescribed conditions:

(a) The ion-exchange resins are prepared in appropriate physical form, and consist of one or more of the following:

(1) Sulfonated copolymer of styrene and divinylbenzene.

(2) Sulfonated anthracite coal meeting the requirements of ASTM-D388-38, Class I, Group 2.

(3) Sulfite-modified cross-linked phenol-formaldehyde, with modification resulting in sulfonic acid groups on side chains.

(4) Methacrylic acid-divinylbenzene copolymer.

(5) Cross-linked polystyrene, first chloromethylated then aminated with trimethylamine, dimethylamine, diethylenetriamine, or dimethylethanolamine.

(6) Diethylenetriamine, triethylenetetramine, or tetraethylenepentamine cross-linked with epichlorohydrin.

(7) Cross-linked phenol-formaldehyde activated with one or both of the following: Triethylene tetramine and tetraethylenepentamine.

(8) Reaction resin of formaldehyde, acetone, and tetraethylenepentamine.

(9) Completely hydrolyzed copolymers of methyl acrylate and divinylbenzene.

(10) Completely hydrolyzed terpolymers of methyl acrylate, divinylbenzene, and acrylonitrile.

(11) Sulfonated terpolymers of styrene, divinylbenzene, and acrylonitrile or methyl acrylate.

(12) Methyl acrylate-divinylbenzene copolymer containing not less than 2 percent by weight of divinylbenzene, aminolyzed with dimethylaminopropylamine.

(b) Ion-exchange resins are used in the purification of foods, including potable water, to remove undesirable ions or to replace less desirable ions with one or more of the following: Bicarbonate, calcium, carbonate, chloride, hydrogen, hydroxyl, magnesium, potassium, sodium, and sulfate, except that the ion-exchange resin identified in paragraph (a)(12) of this section is used only to treat water for use in the manufacture of distilled alcoholic beverages, subject to the following conditions:

(1) The water is subjected to treatment through a mixed bed consisting of the resin identified in paragraph (a)(12) of this section and one of the strongly acidic cation-exchange resins in the hydrogen form identified in paragraph (a)(1), (2), and (11) of this section; or

(2) The water is first subjected to the resin identified in paragraph (a)(12) of this section and is subsequently subjected to treatment through a bed of activated carbon or one of the strongly acidic cation-exchange resins in the hydrogen form identified in paragraph (a)(1), (2), and (11) of this section.

(3) The temperature of the water passing through the resin beds identified in subparagraphs (1) and (2) of this paragraph is maintained at 30° C. or less, and the flow rate of the water passing through the beds is not less than 2 gallons per cubic foot per minute.

(4) The ion-exchange resin identified in paragraph (a)(12) of this section is exempted from the requirements of paragraph (c)(4) of this section, but the strongly acidic cation-exchange resins referred to in subparagraphs (1) and (2) of this paragraph, used in the process meet the requirements of paragraph (c)(4) of this section, except for the exemption described in paragraph (d) of this section.

(c) To insure safe use of ion-exchange resins, each ion-exchange resin will be:

(1) Subjected to pre-use treatment by the manufacturer to guarantee a food-grade purity of ion-exchange resins, in accordance with good manufacturing practice.

(2) Accompanied by label or labeling to include directions for use consistent with the intended functional purpose of the resin.

(3) Used in compliance with the label or labeling required by subparagraph (2) of this paragraph.

(4) Found to result in no more than 1 part per million of organic extractives obtained with each of the named solvents, distilled water, 15 percent alcohol, and 5 percent acetic acid when, having been washed and otherwise treated in accordance with the manufacturer's directions for preparing them for use with food, the ion-exchange resin is subjected to the following test: Using a separate ion-exchange column for each solvent, prepare columns using 50 milliliters of the ready to use ion-exchange resin that is to be tested. While maintaining the highest temperature that will be encountered in use pass through these beds at the rate of 350–450 milliliters per hour the three test solvents distilled water, 15 percent (by volume) ethyl alcohol, and 5 percent (by weight) acetic acid. The first liter of effluent from each solvent is discarded, then the next 2 liters are used to determine organic extractives. The 2-liter sample is carefully evaporated to constant weight at 105° C.; this is total extractives. This residue is fired in a muffle furnace at 850° C. to constant weight; this is ash. Total extractives minus ash equals the organic extractives. If the organic extractives are greater than 1 part per million of the solvent used, a blank should be run on the solvent and a correction should be made by subtracting the total extractives obtained with the blank from the total extractives obtained in the resin test. The solvents used are to be made as follows:

Distilled water (de-ionized water is distilled).

15 percent ethyl alcohol made by mixing 15 volumes of absolute ethyl alcohol A.C.S. reagent grade, with 85 volumes of distilled de-ionized water.

5 percent acetic acid made by mixing 5 parts by weight of A.C.S. reagent grade glacial acetic acid with 95 parts by weight of distilled de-ionized water.

(d) The ion-exchange resins identified in paragraph (a) (1), (2), and (11) of this section are exempted from the acetic-acid extraction requirement of paragraph (c)(4) of this section.

§ 121.1149 Kelp.

Kelp may be safely used as a source of iodine in a food for special dietary use when the total amount of iodine provided for daily intake of the article does not exceed 0.15 milligram. The food additive kelp is the dehydrated, ground product prepared from *Macrocystis pyrifera*, *Laminaria digitata*, *Laminaria saccharina*, and *Laminaria cloustoni*.

§ 121.1150 Estradiol monopalmitate.

(a) A tolerance of zero is established for residues of estradiol monopalmitate in the uncooked edible tissues and byproducts of chickens.

(b) The method of examination prescribed for the quantitative determination of estradiol monopalmitate is as follows: Incorporate finely ground tissues of the treated chickens in the diet of immature mice and assay by the mouse uterine-weight method of E. J. Umberger, J. H. Gass, and J. M. Curtis published in Endocrinology, volume 63, page 806 (1958).

§ 121.1151 Methyl glucoside-coconut oil ester.

Methyl glucoside-coconut oil ester may be safely used in food in accordance with the following conditions:

(a) It is the methyl glucoside-coconut oil ester having the following specifications:

Acid number	10–20.
Hydroxyl number	200–300.
pH (5% aqueous)	4.8–5.0.
Saponification number	178–190.

(b) It is used as an aid in crystallization of sucrose and dextrose at a level not to exceed the minimum quantity required to produce its intended effect.

§ 121.1152 Fumigants for processed grains used in production of fermented malt beverages.

Fumigants for processed grain may be safely used, in accordance with the following conditions.

(a) They consist of carbon tetrachloride with either carbon disulfide or ethylene dichloride, with or without pentane.

(b) They are used to fumigate corn grits and cracked rice used in the production of fermented malt beverages.

(c) To assure safe use of the fumigant, its label and labeling shall conform to the label and labeling registered by the United States Department of Agriculture, and the usage employed should conform with such label or labeling.

§ 121.1153 Thiabendazole.

A tolerance of zero is established for residues of thiabendazole in milk and in the uncooked edible tissues and byproducts of cattle.

§121.1154 Synthetic isoparaffinic petroleum hydrocarbons.

Synthetic isoparaffinic petroleum hydrocarbons may be safely used in food, in accordance with the following conditions;

(a) They are produced by synthesis from petroleum gases and consist of a mixture of liquid hydrocarbons meeting the following specifications:

Boiling point 200°–500° F., as determined by A.S.T.M. Method D-86.
Ultraviolet absorbance:
  260–319 millimicrons—1.5 maximum.
  320–329 millimicrons—0.08 maximum.
  330–350 millimicrons—0.05 maximum.
Nonvolatile residue: 0.002 gram per 100 milliliters maximum.

Synthetic isoparaffinic petroleum hydrocarbons containing antioxidants shall meet the specified ultraviolet absorbance limits after correction for any absorbance due to the antioxidants. The ultraviolet absorbance shall be determined by the procedure described for application to mineral oil under "Specifications" on page 66 of the Journal of the Association of Official Agricultural Chemists, Vol. 45 (February 1962), disregarding the last sentence of that procedure. For hydrocarbons boiling below 250° F., the nonvolatile residue shall be determined by A.S.T.M. procedure D-1353; for those boiling above 250° F., A.S.T.M. procedure D-381 shall be used.

(b) Isoparaffinic petroleum hydrocarbons may contain antioxidants authorized for use in food in an amount not to exceed that reasonably required to accomplish the intended technical effect nor to exceed any prescribed limitations.

(c) Synthetic isoparaffinic petroleum hydrocarbons are used or intended for use as follows:

Uses	*Limitations*
1. In the froth-flotation cleaning of vegetables.	In an amount not to exceed good manufacturing practice.
2. As a component of insecticide formulations for use on processed foods.	Do.
3. As a component of coatings on fruits and vegetables.	Do.
4. As a coating on shell eggs.	Do.
5. As a float on fermentation fluids in the manufacture of vinegar and wine and on brine used in curing pickles, to prevent or retard access of air, evaporation, and contamination with wild organisms during fermentation.	Do.

§ 121.1155 Chemicals used for the control of micro-organisms in cane-sugar mills.

The food additives disodium cyanodithioimidocarbonate, ethylenediamine, and potassium *N*-methyldithiocarbamate may be safely used in combination in accordance with the following conditions:

(a) They are used in the control of micro-organisms in cane-sugar mills.

(b) They are applied, in combination, to the cane-sugar mill grinding system in quantities expressed in terms of weight of cane, as follows:

Disodium cyanodithioimidocarbonate	2.5 parts per million.
Ethylenediamine	1.0 part per million.
Potassium *N*-methyldithiocarbamate	3.5 parts per million.

(c) To assure safe use of the additives, their label and labeling shall conform to that registered with the United States Department of Agriculture.

§ 121.1156 Petroleum wax.

Petroleum wax may be safely used in or on food, in accordance with the following conditions:

(a) Petroleum wax is a mixture of solid hydrocarbons, paraffinic in nature, derived from petroleum, and refined to meet the specifications prescribed by this section.

(b) Petroleum wax meets the following ultraviolet absorbance limits when subjected to the analytical procedure described in this paragraph.

Ultraviolet absorbance per centimeter path length

280–289 millimicrons	0.15 maximum
290–299 millimicrons	0.12 maximum
300–359 millimicrons	0.08 maximum
360–400 millimicrons	0.02 maximum

ANALYTICAL SPECIFICATION FOR PETROLEUM WAX

General Instructions

Because of the sensitivity of the test, the possibility of errors arising from contamination is great. It is of the greatest importance that all glassware be scrupulously cleaned to remove all organic matter such as oil, grease, detergent residues, etc. Examine all glassware, including stoppers and stopcocks, under ultraviolet light to detect any residual fluorescent contamination. As a precautionary measure it is recommended practice to rinse all glassware with purified isooctane immediately before use. No grease is to be used on stopcocks or joints. Great care to avoid contamination of wax samples in handling and to assure absence of any extraneous material arising from inadequate packaging is essential. Because some of the polynuclear hydrocarbons sought in this test are very susceptible to photo-oxidation, the entire procedure is to be carried out under subdued light.

Apparatus

Separatory funnels. 250-milliliter, 500-milliliter, 1,000-milliliter, and preferably 2,000-milliliter capacity, equipped with tetrafluoroethylene polymer stopcocks.

Reservoir. 500-milliliter capacity, equipped with a 24/40 standard taper male fitting at the bottom and a suitable ball-joint at the top for connecting to the nitrogen supply. The male fitting should be equipped with glass hooks.

Chromatographic tube. 180 millimeters in length, inside diameter to be 15.7 millimeters ±0.1 millimeter, equipped with a coarse, fritted-glass disc, a tetrafluoroethylene polymer stopcock, and a female 24/40 standard tapered fitting at the opposite end. (Over-all length of the column with the female joint is 235 millimeters.) The female fitting should be equipped with glass hooks.

Disc. Tetrafluorethylene polymer 2-inch diameter disc approximately $\frac{3}{16}$-inch thick with a hole bored in the center to closely fit the stem of the chromatographic tube.

Heating jacket. Conical, for 500-milliliter separatory funnel. (Used with variable transformer heat control.)

Suction flask. 250-milliliter or 500-milliliter filter flask.

Condenser. 24/40 joints, fitted with a drying tube, length optional.

Evaporation flask (*optional*). 250-milliliter or 500-milliliter capacity all-glass flask equipped with standard taper stopper having inlet and outlet tubes to permit passage of nitrogen across the surface of contained liquid to be evaporated.

Vacuum distillation assembly. All glass (for purification of dimethyl sulfoxide); 2-liter distillation flask with heating mantle; Vigreaux vacuum-jacketed condenser (or equivalent) about 45 centimeters in length and distilling head with separable cold finger condenser. Use of tetrafluoroethylene polymer sleeves on the glass joints will prevent freezing. Do not use grease on stopcocks or joints.

Spectrophotometric cells. Fused quartz cells, optical path length in the range of 5.000 centimeters ±0.005 centimeter; also for checking spectrophotometer performance only, optical path length in the range 1.000 centimeter ±0.005 centimeter. With distilled water in the cells, determine any absorbance differences.

Spectrophotometer. Spectral range 250 millimicrons–400 millimicrons with spectral slit width of 2 millimicrons or less; under instrument operating conditions for these absorbance measurements, the spectrophotometer shall also meet the following performance requirements:

Absorbance repeatability, ±0.01 at 0.4 absorbance.

Absorbance accuracy,[1] ±0.05 at 0.4 absorbance.

Wavelength repeatability, ±0.2 millimicron.

Wavelength accuracy, ±1.0 millimicron.

Nitrogen cylinder. Water-pumped or equivalent purity nitrogen in cylinder equipped with regulator and valve to control flow at 5 p.s.i.g.

Reagents and Materials

Organic solvents. All solvents used throughout the procedure shall meet the specifications and tests described in this specification. The isooctane, benzene, acetone, and methyl alcohol designated in the list following this paragraph shall pass the following test:

To the specified quantity of solvent in a 250-milliliter Erlenmeyer flask, add 1 milliliter of purified *n*-hexadecane and evaporate on the steam bath under a stream of nitrogen (a loose aluminum foil jacket around the flask will speed evaporation). Discontinue evaporation when not over 1 milliliter of residue remains. (To the residue from benzene add a 10-milliliter portion of purified isooctane, reevaporate, and repeat once to insure complete removal of benzene.)

Alternatively, the evaporation time can be reduced by using the optional evaporation flask. In this case the solvent and *n*-hexadecane are placed in the flask on the steam bath, the tube assembly is inserted, and a stream of nitrogen is fed through the inlet tube while the outlet tube is connected to a solvent trap and vacuum line in such a way as to prevent any flow-back of condensate into the flask.

Dissolve the 1 milliliter of hexadecane residue in isooctane and make to 25 milliliters volume. Determine the absorbance in the 5-centimeter path length cells compared to isooctane as reference. The absorbance of the solution of the solvent residue (except for methyl alcohol) shall not exceed 0.01 per centimeter path length between 280 and 400 mμ. For methyl alcohol this absorbance value shall be 0.00.

Isooctane (2,2,4-trimethylpentane). Use 180 milliliters for the test described in the preceding paragraph. Purify, if necessary, by passage through a column of activated silica gel (Grade 12, Davison Chemical Company, Baltimore, Maryland, or equivalent) about 90 centimeters in length and 5 centimeters to 8 centimeters in diameter.

Benzene, A.C.S. reagent grade. Use 150 milliliters for the test. Purify, if necessary, by distillation or otherwise.

Acetone, A.C.S. reagent grade. Use 200 milliliters for the test. Purify, if necessary, by distillation.

Eluting mixtures:

1. *10 percent benzene in isooctane.* Pipet 50 milliliters of benzene into a 500-milliliter glass-stoppered volumetric flask and adjust to volume with isooctane, with mixing.

2. *20 percent benzene in isooctane.* Pipet 50 milliliters of benzene into a 250-milliliter glass-stoppered volumetric flask, and adjust to volume with isooctane, with mixing.

3. *Acetone-benzene-water mixture.* Add 20 milliliters of water to 380 milliliters of acetone and 200 milliliters of benzene, and mix.

n-Hexadecane, 99 percent olefin-free. Dilute 1.0 milliliter of *n*-hexadecane to 25 milliliters with isooctane and determine the absorbance in a 5-centimeter cell compared to isooctane as reference point between 280 mμ–400 mμ. The absorbance per centimeter path length shall not exceed 0.00 in this range. Purify, if necessary, by percolation through activated silica gel or by distillation.

Methyl alcohol, A.C.S. reagent grade. Use 10.0 milliliters of methyl alcohol. Purify, if necessary, by distillation.

Dimethyl sulfoxide. Pure grade, clear, water-white, m.p. 18° minimum. Dilute 120 milliliters of dimethyl sulfoxide with 240 milliliters of distilled water in a 500-milliliter separatory funnel, mix and allow to cool for 5–10 minutes. Add 40 milliliters of isooctane to the solution and extract by shaking the funnel vigorously for 2 minutes. Draw off the lower aqueous layer into a second 500-milliliter separatory funnel and repeat the extraction with 40 milliliters of isooctane. Draw off and discard the aqueous layer. Wash each of the 40-milliliter extractives three times with 50-milliliter portions of distilled water. Shaking time for each wash is 1 minute. Discard the aqueous layers. Filter the first extractive through anhydrous sodium sulfate prewashed with isooctane (see *Sodium sulfate* under "Reagents and materials" for preparation of filter), into a 250-milliliter Erlenmeyer flask, or optionally into the evaporating flask. Wash the first separatory funnel with the second 40-milliliter isooctane extractive, and pass through the sodium sulfate into the flask. Then wash the second and first separatory funnels successively with a 10-milliliter portion of isooctane, and pass the solvent through the sodium sulfate into the flask. Add 1 milliliter of *n*-hexadecane and evaporate the isooctane on the steam bath under nitrogen. Discontinue evaporation when not over 1 milliliter of residue remains. To the residue, add a 10-milliliter portion of isooctane and reevaporate to 1 milliliter of hexadecane. Again, add 10 milliliters of isooctane to the residue and evaporate to 1 milliliter of hexadecane to insure complete removal of all volatile materials. Dissolve the 1 milliliter of hexadecane in isooctane and make to 25-milliliter volume. Determine the absorbance in 5-centimeter path length cells compared to isooctane as reference. The absorbance of the solution should not exceed 0.02 per centimeter path length in the 280 mμ–400 mμ range. (Note: Difficulty in meeting this absorbance specification may be due to organic impurities in the distilled water. Repetition of the test omitting the dimethyl sulfoxide will disclose their presence. If necessary to meet the specification, purify the water by redistillation, passage through an ion-exchange resin, or otherwise.)

Purify, if necessary, by the following procedure: To 1,500 milliliters of dimethyl sulfoxide in a 2-liter glass-stoppered flask, add 6.0 milliliters of phosphoric acid and 50 grams of Norit A (decolorizing carbon, alkaline) or equivalent. Stopper the flask, and with the use of a magnetic stirrer (tetrafluoroethylene polymer coated bar) stir the solvent for 15 minutes. Filter the dimethyl sulfoxide through four thicknesses of fluted paper (18.5 centimeters, Schleicher & Schuell, No. 597, or equivalent). If the initial filtrate contains carbon fines, refilter through the same filter until a clear filtrate is obtained. Protect the sulfoxide from air and moisture during this operation by covering the solvent in the funnel and collection flask with a layer of isooctane. Transfer the filtrate to a 2-liter separatory funnel and draw off the dimethyl sulfoxide into the 2-liter distillation flask of the vacuum distillation assembly and distill at approximately 3-millimeter Hg pressure or less. Discard the first 200-milliliter fraction of the distillate and replace the distillate collection flask with a clean one. Continue the distillation until approximately 1 liter of the sulfoxide has been collected.

At completion of the distillation, the reagent should be stored in glass-stoppered bottles since it is very hygroscopic and will react with some metal containers in the presence of air.

Phosphoric acid. 85 percent A.C.S. reagent grade.

Sodium borohydride. 98 percent.

Magnesium oxide (Sea Sorb 43, Food Machinery Company, Westvaco Division, distributed by chemical supply firms, or equivalent). Place 100 grams of the magnesium oxide in a large beaker, add 700 milliliters of distilled water to make a thin slurry, and heat on a steam bath for 30 minutes with intermittent stirring. Stir well initially to insure that all the adsorbent is completely wetted. Using a Buchner funnel and a filter paper (Schleicher & Schuell No. 597, or equivalent) of suitable diameter, filter with suction. Continue suction until water no longer drips from the funnel. Transfer the adsorbent to a glass trough lined with aluminum foil (free from rolling oil). Break up the magnesia with a clean spatula and spread out the adsorbent on the aluminum foil in a layer about 1 centimeter to 2 centimeters thick. Dry for 24 hours at 160° C. ±1° C. Pulverize the magnesia with mortar and pestle. Sieve the pulverized adsorbent between 60–180 mesh. Use the magnesia retained on the 180-mesh sieve.

Celite 545. Johns-Manville Company, diatomaceous earth, or equivalent.

Magnesium oxide-Celite 545 mixture (2+1) by weight. Place the magnesium oxide (60–180 mesh) and the Celite 545 in 2 to 1 proportions, respectively, by weight in a glass-stoppered flask large enough for adequate mixing. Shake vigorously for 10 minutes. Transfer the mixture to a glass trough lined with aluminum foil (free from rolling oil) and spread it out on a layer about 1 centimeter to 2 centimeters thick. Reheat the mixture at 160° C. ±1° C. for 2 hours, and store in a tightly closed flask.

Sodium sulfate, anhydrous, A.C.S. reagent grade, preferably in granular form. For each bottle of sodium sulfate reagent used, establish as follows the necessary sodium sulfate prewash to provide such filters required in the method: Place approximately 35 grams of anhydrous sodium sulfate in a 30-milliliter coarse, fritted-glass funnel or in a 65-millimeter filter funnel with glass wool plug; wash with successive 15-milliliter portions of the indicated solvent until a 15-milliliter portion of the wash shows 0.00 absorbance per centimeter path length between 280 mμ and 400 mμ when tested as prescribed under "Organic solvents." Usually three portions of wash solvent are sufficient.

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[1] As determined by procedure using potassium chromate for reference standard and described in National Bureau of Standards Circular 484, Spectrophotometry, U.S. Department of Commerce, 1949. The accuracy is to be determined by comparison with the standard values at 290, 345, and 400 millimicrons.

Before proceeding with analysis of a sample, determine the absorbance in a 5-centimeter path cell between 250 mμ and 400 mμ for the reagent blank by carrying out the procedure, without a wax sample, at room temperature, recording the spectra after the extraction stage and after the complete procedure as prescribed. The absorbance per centimeter path length following the extraction stage should not exceed 0.040 in the wavelength range from 280 m_μ to 400 m_μ; the absorbance per centimeter path length follow the complete procedure should not exceed 0.070 in the wavelength range from 280 mμ to 299 mμ, inclusive, nor 0.045 in the wavelength range from 300 mμ to 400 mμ. If in either spectrum the characteristic benzene peaks in the 250 mμ–260 mμ region are present, remove the benzene by the procedure under "Organic solvents" and record absorbance again.

Place 300 milliliters of dimethyl sulfoxide in a 1-liter separatory funnel and add 75 milliliters of phosphoric acid. Mix the contents of the funnel and allow to stand for 10 minutes. (The reaction between the sulfoxide and the acid is exothermic. Release pressure after mixing, then keep funnel stoppered.) Add 150 milliliters of isooctane and shake to preequilibrate the solvents. Draw off the individual layers and store in glass-stoppered flasks.

Place a representative 1-kilogram sample of wax, or if this amount is not available, the entire sample, in a beaker of a capacity about three times the volume of the sample and heat with occasional stirring on a steam bath until the wax is completely melted and homogeneous. Weigh four 25-gram ±0.2 gram portions of the melted wax in separate 100-milliliter beakers. Reserve three of the portions for later replicate analyses as necessary. Pour one weighed portion immediately after remelting (on the steam bath) into a 500-milliliter separatory funnel containing 100 milliliters of the preequilibrated sulfoxide-phosphoric acid mixture that has been heated in the heating jacket at a temperature just high enough to keep the wax melted. (NOTE: In preheating the sulfoxide-acid mixture, remove the stopper of the separatory funnel at intervals to release the pressure.)

Promptly complete the transfer of the sample to the funnel in the jacket with portions of the preequilibrated isooctane, warming the beaker, if necessary, and using a total volume of just 50 milliliters of the solvent. If the wax comes out of solution during these operations, let the stoppered funnel remain in the jacket until the wax redissolves. (Remove stopper from the funnel at intervals to release pressure.) When the wax is in solution, remove the funnel from the jacket and shake it vigorously for 2 minutes. Set up three 250-milliliter separatory funnels with each containing 30 milliliters of preequilibrated isooctane. After separation of the liquid phases, allow to cool until the main portion of the wax-isooctane solution begins to show a precipitate. Gently swirl the funnel when precipitation first occurs on the inside surface of the funnel to accelerate this process. Carefully draw off the lower layer, filter it slowly through a thin layer of glass wool fitted loosely in a filter funnel into the first 250-milliliters separatory funnel, and wash in tandem with the 30-milliliter portions of isooctane contained in the 250-milliliter separatory funnels. Shaking time for each wash is 1 minute. Repeat the extraction operation with two additional portions of the sulfoxide-acid mixture, replacing the funnel in the jacket after each extraction to keep the wax in solution and washing each extractive in tandem through the same three portions of isooctane.

Collect the successive extractives (300 milliliters total) in a separatory funnel (preferably 2-liter), containing 480 milliliters of distilled water, mix, and allow to cool for a few minutes after the last extractive has been added. Add 80 milliliters of isooctane to the solution and extract by shaking the funnel vigorously for 2 minutes. Draw off the lower aqueous layer into a second separatory funnel (preferably 2-liter) and repeat the extraction with 80 milliliters of isooctane. Draw off and discard the aqueous layer. Wash each of the 80-milliliter extractives three times with 100-milliliter portions of distilled water. Shaking time for each wash is 1 minute. Discard the aqueous layers. Filter the first extractive through anhydrous sodium sulfate prewashed with isooctane (see *Sodium Sulfate* under "Reagents and Materials" for preparation of filter) into a 250-milliliter Erlenmeyer flask (or optionally into the evaporation flask). Wash the first separatory funnel with the second 80-milliliter isooctane extractive and pass through the sodium sulfate. Then wash the second and first separatory funnels successively with a 20-milliliter portion of isooctane and pass the solvent through the sodium sulfate into the flask. Add 1 milliliter of *n*-hexadecane and evaporate the isooctane on the steam bath under nitrogen. Discontinue evaporation when not over 1 milliliter of residue remains. To the residue, add a 10-milliliter portion of isooctane, reevaporate to 1 milliliter of hexadecane, and repeat this operation once.

Quantitatively transfer the residue with isooctane to a 25-milliliter volumetric flask, make to volume, and mix. Determine the absorbance of the solution in the 5-centimeter path length cells compared to isooctane as reference between 280 mμ–400 mμ (take care to lose none of the solution in filling the sample cell). Correct the absorbance values for any absorbance derived from reagents as determined by carrying out the procedure without a wax sample. If the corrected absorbance does not exceed the limits prescribed in this paragraph (b), the wax meets the ultraviolet absorbance specifications. If the corrected absorbance per centimeter path length exceeds the limits prescribed in this paragraph (b), proceed as follows:

Quantitatively transfer the isooctane solution to a 125-milliliter flask equipped with 24/40 joint and evaporate the isooctane on the steam bath under a stream of nitrogen to a volume of 1 milliliter of hexadecane. Add 10 milliliter of methyl alcohol and approximately 0.3 gram of sodium borohydride. (Minimize exposure of the borohydride to the atmosphere. A measuring dipper may be used.) Immediately fit a water-cooled condenser equipped with a 24/40 joint and with a drying tube into the flask, mix until the borohydride is dissolved, and allow to stand for 30 minutes at room temperature, with intermittent swirling. At the end of this period, disconnect the flask and evaporate the methyl alcohol on the steam bath under nitrogen until the sodium borohydride begins to come out of the solution. Then add 10 milliliters of isooctane and evaporate to a volume of about 2–3 milliliters. Again, add 10 milliliters of isooctane and concentrate to a volume of approximately 5 milliliters. Swirl the flask repeatedly to assure adequate washing of the sodium borohydride residues.

Fit the tetrafluoroethylene polymer disc on the upper part of the stem of the chromatographic tube, then place the tube with the disc on the suction flask and apply the vacuum (approximately 135 millimeters Hg pressure). Weight out 14 grams of the 2:1 magnesium oxide-Celite 545 mixture and pour the adsorbent mixture into the chromatographic tube in approximately 3-centimeter layers. After the addition of each layer, level off the top of the adsorbent with a flat glass rod or metal plunger by pressing down firmly until the adsorbent is well packed. Loosen the topmost few millimeters of each adsorbent layer with the end of a metal rod before the addition of the next layer. Continue packing in this manner until all the 14 grams of the adsorbent is added to the tube. Level off the top of the adsorbent by pressing down firmly with a flat glass rod or metal plunger to make the depth of the adsorbent bed approximately 12.5 centimeters in depth. Turn off the vacuum and remove the suction flask. Fit the 500-milliliter reservoir onto the top of the chromatographic column and prewet the column by passing 100 milliliters of isooctane through the column. Adjust the nitrogen pressure so that the rate of descent of the isooctane coming off of the column is between 2–3 milliliters per minute. Discontinue pressure just before the last of the isooctane reaches the level of the adsorbent. (CAUTION: Do not allow the liquid level to recede below the adsorbent level at any time.) Remove the reservoir and decant the 5-milliliter isooctane concentrate solution onto the column and with slight pressure again allow the liquid level to recede to barely above the adsorbent level. Rapidly complete the transfer similarly with two 5-milliliter portions of isooctane, swirling the flask repeatedly each time to assure adequate washing of the residue. Just before the final 5-milliliter wash reaches the top of the adsorbent, add 100 milliliters of isooctane to the reservoir and continue the percolation at the 2–3 milliliter per minute rate. Just before the last of the isooctane reaches the adsorbent level, add 100 milliliters of 10 percent benzene in isooctane to the reservoir and continue the percolation at the aforementioned rate. Just before the solvent mixture reaches adsorbent level, add 25 milliliters of 20 percent benzene in isooctane to the reservoir and continue the percolation at 2–3 milliliters per minute until all this solvent mixture has been removed from the column. Discard all the elution solvents collected up to this point. Add 300 milliliters of the acetone-benzene-water mixture to the reservoir and percolate through the column to elute the polynuclear compounds. Collect the eluate in a clean 1-liter separatory funnel. Allow the column to drain until most of the solvent mixture is removed. Wash the eluate three times with 300-milliliter portions of distilled water, shaking well for each wash. (The addition of small amounts of sodium chloride facilitates separation.) Discard the aqueous layer after each wash. After the final separation, filter the residual benzene through anhydrous sodium sulfate prewashed with benzene (see *Sodium sulfate* under "Reagents and Materials" for preparation of filter) into a 250-milliliter Erlenmeyer flask (or optionally into the evaporation flask). Wash the separatory funnel with two additional 20-milliliter portions of benzene which are also filtered through the sodium sulfate. Add 1 milliliter of *n*-hexadecane and completely remove the benzene by evaporation under nitrogen, using the special procedure to eliminate benzene as previously described under "Organic Solvents." Quantitatively transfer the residue with isooctane to a 25-milliliter volumetric flask and adjust to volume. Determine the absorbance of the solution in the 5-centimeter path length cells compared to isooctane as reference between 250 mμ–400 mμ. Correct for any absorbance derived from the reagents as determined by carrying out the procedure without a wax sample. If either spectrum shows the characteristic benzene peaks in the 250 mμ–260 mμ region, evaporate the solution to remove benzene by the procedure under "Organic Solvents." Dissolve the residue, transfer quantitatively, and adjust to volume in isooctane in a 25-milliliter volumetric flask. Record the absorbance again. If the corrected absorbance does not exceed the limits prescribed in this paragraph (b), the wax meets the ultraviolet absorbance specifications.

(c) Petroleum wax may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the act, in an amount not greater than that required to produce its intended effect.

(d) Petroleum wax is used or intended for use as follows:

Use	*Limitations*
In chewing gum base, as a masticatory substance.	In an amount not to exceed good manufacturing practice.
On cheese and raw fruits and vegetables as a protective coating.	Do.
As a defoamer in food.	In accordance with § 121.1099.

§ 121.1157 Prednisone.

A tolerance of zero is established for residues of prednisone in milk from dairy animals.

§ 121.1158 Methylparaben.

A tolerance of zero is established for residues of methylparaben in milk from dairy animals.

§ 121.1159 Propylparaben.

A tolerance of zero is established for residues of propylparaben in milk from dairy animals.

§ 121.1160 Hydroxypropyl cellulose.

The food additive hydroxypropyl cellulose may be safely used in food, except standardized foods that do not provide for such use, in accordance with the following prescribed conditions:

(a) The additive is a cellulose ether containing propylene glycol groups attached by an ether linkage and contains, on an anhydrous basis, not more than 4.6 hydroxypropyl groups per anhydroglucose unit. The additive has a minimum viscosity of 75 centipoises for 5 percent by weight aqueous solution at 25° C.

(b) The additive is used or intended for use as an emulsifier, film former, protective colloid, stabilizer, suspending agent, or thickener, in accordance with good manufacturing practice.

§ 121.1161 Ethylene oxide polymer.

The polymer of ethylene oxide may be safely used as a foam stabilizer in fermented malt beverages in accordance with the following conditions.

(a) It is the polymer of ethylene oxide having a minimum viscosity of 1,500 centipoises in a 1 percent aqueous solution at 25° C.

(b) It is used at a level not to exceed 300 parts per million by weight of the fermented malt beverage.

(c) The label of the additive bears directions for use to insure compliance with paragraph (b) of this section.

§ 121.1162 Calcium lactobionate.

The food additive calcium lactobionate may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the calcium salt of lactobionic acid (4-(β, D-galactosido)-D-gluconic acid) produced by the oxidation of lactose.

(b) It is used or intended for use as a firming agent in dry pudding mixes at a level not greater than that required to accomplish the intended effect.

§ 121.1163 Natural flavoring substances and natural substances used in conjunction with flavors.

Natural flavoring substances and natural adjuvants may be safely used in food in accordance with the following conditions.

(a) They are used in the minimum quantity required to produce their intended physical or technical effect, and in accordance with all the principles of good manufacturing practice.

(b) In the appropriate forms (plant parts, fluid and solid extracts, concretes, absolutes, oils, gums, balsams, resins, oleoresins, waxes, and distillates) they consist of one or more of the following, used alone or in combination with flavoring substances and adjuvants generally recognized as safe in food, previously sanctioned for such use, or regulated in any section of this Subpart D.

Common name	Scientific name	Limitations
Althea root and flowers	*Althea officinalis* L.	
Amyris (West Indian sandalwood).	*Amyris balsamifera* L.	
Arnica flowers	*Arnica montana* L., *A. fulgens* Pursh, *A. sororia* Greene, or *A. cordifolia* Hooker.	In alcoholic beverages only.
Artemisia (wormwood)	*Artemisia* spp.	In alcoholic beverages only; not more than 10 p.p.m. thujone in the finished beverage.
Artichoke leaves	*Cynara scolymus* L.	In alcoholic beverages only.
Beeswax, white (Cire d'abeille).	*Apis mellifera* L.	
Benzoin resin	*Styrax benzoin* Dryander, *S. parallelonevrus* Perkins, *S. tonkinensis* (Pierre) Craib ex Hartwich, or other spp. of the Section *Anthostyrax* of the genus *Styrax*.	
Blackberry bark	*Rubus*, Section *Eubatus*.	
Boronia flowers	*Boronia megastigma* Nees.	
Buchu leaves	*Barosma betulina* Bartl. et Wendl., *B. crenulata* (L.) Hook., or *B. serratifolia* Willd.	
Buckbean leaves	*Menyanthes trifoliata* L.	In alcoholic beverages only.
Cajeput	*Melaleuca leucadendron* L. and other *Melaleuca* spp.	
Calumba root	*Jateorhiza palmata* (Lam.) Miers.	In alcoholic beverages only.
Camphor tree	*Cinnamomum camphora* (L.) Nees et Eberm.	Safrole free.
Cascara sagrada	*Rhamnus purshiana* DC.	
Cassie flowers	*Acacia farnesiana* (L.) Willd.	
Catechu, black	*Acacia catechu* Willd.	
Cedar, white (arbor-vitae), leaves and twigs.	*Thuja occidentalis* L.	Not more than 10 p.p.m. thujone in the finished food.
Centaury	*Centaurium umbellatum* Gilib.	In alcoholic beverages only.
Cherry pits	*Prunus avium* L. or *P. cerasus* L.	Not to exceed 25 p.p.m. prussic acid.
Cherry-laurel leaves	*Prunus laurocerasus* L.	Not to exceed 25 p.p.m. prussic acid.
Chirata	*Swertia chirata* Buch.-Ham.	In alcoholic beverages only.
Cinchona, red, bark	*Cinchona succirubra* Pav. or its hybrids.	In beverages only; not more than 83 p.p.m. total cinchona alkaloids in finished beverage.
Cinchona, yellow, bark	*Cinchona ledgeriana* Moens, *C. calisaya* Wedd., or hybrids of these with other spp. of *Cinchona*.	In beverages only; not more than 83 p.p.m. total cinchona alkaloids in finished beverage.
Copaiba	South American spp. of *Copaifera* L.	
Costmary	*Chrysanthemum balsamita* L.	In alcoholic beverages only.
Costus root	*Saussurea lappa* Clarke.	
Cubeb	*Piper cubeba* L. f.	
Currant, black, buds and leaves.	*Ribes nigrum* L.	
Davana	*Artemisia pallens* Wall.	
Dill, Indian	*Anethum sowa* Roxb. (*Peucedanum graveolens* Benth. et Hook., *Anethum graveolens* L.).	
Dittany (fraxinella) roots	*Dictamnus albus* L.	In alcoholic beverages only.
Dittany of Crete	*Origanum dictamnus* L.	
Elder tree leaves	*Sambucus nigra* L.	In alcoholic beverages only; not to exceed 25 p.p.m. prussic acid.
Elecampane rhizome and roots.	*Inula helenium* L.	In alcoholic beverages only.
Elemi	*Canarium commune* L. or *C. luzonicum* Miq.	
Erigeron	*Erigeron canadensis* L.	
Eucalyptus globulus leaves	*Eucalyptus globulus* Labill.	
Fir ("pine") needles and twigs.	*Abies sibirica* Ledeb., *A. alba* Mill., *A. sachalinensis* Masters or *A. mayriana* Miyabe et Kudo.	
Fir, balsam, needles and twigs.	*Abies balsamea* (L.) Mill.	
Galanga, greater	*Alpinia galanga* Willd.	In alcoholic beverages only.
Galbanum	*Ferula galbaniflua* Boiss. et Buhse and other *Ferula* spp.	
Gambir (catechu, pale)	*Uncaria gambir* Roxb.	
Genet flowers	*Spartium junceum* L.	
Gentian rhizome and roots	*Gentiana lutea* L.	
Gentian, stemless	*Gentiana acaulis* L.	In alcoholic beverages only.
Germander, chamaedrys	*Teucrium chamaedrys* L.	Do.
Germander, golden	*Teucrium polium* L.	Do.
Guaiac	*Guaiacum officinale* L., *G. santum* L., *Bulnesia sarmienti* Lor.	
Guarana	*Paullinia cupana* HBK.	
Haw, black, bark	*Viburnum prunifolium* L.	
Hemlock needles and twigs	*Tsuga canadensis* (L.) Carr. or *T. heterophylla* (Raf.) Sarg.	
Hyacinth flowers	*Hyacinthus orientalis* L.	
Iceland moss	*Cetraria islandica* Ach.	In alcoholic beverages only.
Imperatoria	*Peucedanum ostruthium* (L.) Koch (*Imperatoria ostruthium* L.).	Do.
Iva	*Achillea moschata* Jacq.	Do.
Labdanum	*Cistus* spp.	
Lemon-verbena	*Lippia citriodora* HBK.	In alcoholic beverages only.

Common name	Scientific name	Limitations
Linaloe wood	*Bursera delpechiana* Poiss. and other *Bursera* spp.	
Linden leaves	*Tilia* spp.	In alcoholic beverages only.
Lovage	*Levisticum officinale* Koch.	
Maidenhair fern	*Adiantum capillus-veneris* L.	In alcoholic beverages only.
Maple, mountain	*Acer spicatum* Lam.	
Mimosa (black wattle) flowers.	*Acacia decurrens* Willd. var. *dealbata*.	
Mullein flowers	*Verbascum phlomoides* L. or *V. thapsiforme* Schrad.	In alcoholic beverages only.
Myrrh	*Commiphora molmol* Engl., *C. abyssinica* (Berg) Engl., or other *Commiphora* spp.	
Myrtle leaves	*Myrtus communis* L.	In alcoholic beverages only.
Oak, English, wood	*Quercus robur* L.	In alcoholic beverages only.
Oak, white, chips	*Quercus alba* L.	
Oak moss	*Evernia prunastri* (L.) Ach., *E. furfuracea* (L.) Mann, and other lichens.	Not more than 10 p.p.m. thujone in the finished food.
Olibanum	*Boswellia carteri* Birdw. and other *Boswellia* spp.	
Orris root	*Iris germanica* L. (including its variety *florentina* Dykes) and *I. pallida* Lam.	
Pansy	*Viola tricolor* L.	In alcoholic beverages only.
Patchouly	*Pogostemon cablin* Benth. and *P. heyneanus* Benth.	
Peach leaves	*Prunus persica* (L.) Batsch.	In alcoholic beverages only; not to exceed 25 p.p.m. prussic acid.
Pennyroyal, American	*Hedeoma pulegioides* (L.) Pers.	
Pennyroyal, European	*Mentha pulegium* L.	In alcoholic beverages only.
Pine, dwarf, needles and twigs.	*Pinus mugo* Turra var. *pumilio* (Haenke) Zenari.	
Pine, Scotch, needles and twigs.	*Pinus sylvestris* L.	
Pine, white, bark	*Pinus strobus* L.	In alcoholic beverages only.
Poplar buds	*Populus balsamifera* L. (*P. tacamahacca* Mill.), *P. candicans* Ait., or *P. nigra* L.	Do.
Quassia	*Picrasma excelsa* (Sw.) Planch. or *Quassia amara* L.	
Quebracho bark	*Aspidosperma quebracho-blanco* Schlecht. or (*Quebrachia lorentzii* Griseb).	*Schinopsis lorentzii* (Griseb.) Engl.
Rhatany root	*Krameria triandra* Ruiz et Pav. or *K. argentea* Mart.	
Rhubarb, garden root	*Rheum rhaponticum* L.	In alcoholic beverages only.
Rhubarb root	*Rheum officinale* Baill., *R. palmatum* L., or other spp. (excepting *R. rhaponticum* L.) or hybrids of *Rheum* grown in China.	
Roselle	*Hibiscus sabdariffa* L.	Do.
Sandalwood, white (yellow, or East Indian).	*Santalum album* L.	
Sarsaparilla	*Smilax aristolochiaefolia* Mill., (Mexican sarsaparilla), *S. regelii* Killip et Morton (Honduras sarsaparilla), *S. febrifuga* Kunth (Ecuadorean sarsaparilla), or undetermined *Smilax* spp. (Ecuadorean or Central American sarsaparilla).	
Sassafras leaves	*Sassafras albidum* (Nutt.) Nees.	Safrole free.
Senna, Alexandria	*Cassia acutifolia* Delile.	
Serpentaria (Virginia snakeroot).	*Aristolochia serpentaria* L.	In alcoholic beverages only.
Simaruba bark	*Simaruba amara* Aubl.	In alcoholic beverages only.
Snakeroot, Canadian (wild ginger).	*Asarum canadense* L.	
Spruce needles and twigs	*Picea glauca* (Moench) Voss or *P. mariana* (Mill.) BSP.	
Storax (styrax)	*Liquidambar orientalis* Mill. or *L. styraciflua* L.	
Tagetes (marigold)	*Tagetes patula* L., *T. erecta* L., or *T. minuta* L. (*T. glandulifera* Schrank).	As oil only.
Thistle, blessed (holy thistle).	*Cnicus benedictus* L.	In alcoholic beverages only.
Thymus capitatus (Spanish "origanum").	*Thymus capitatus* Hoffmg. et Link.	
Tolu	*Myroxylon balsamum* (L.) Harms.	
Turpentine	*Pinus palustris* Mill. and other *Pinus* spp. which yield terpene oils exclusively.	
Valerian rhizome and roots	*Valeriana officinalis* L.	
Veronica	*Veronica officinalis* L.	In alcoholic beverages only.
Vervain, European	*Verbena officinalis* L.	Do.
Vetiver	*Vetiveria zizanioides* Stapf.	
Violet, Swiss	*Viola calcarata* L.	In alcoholic beverages only.
Woodruff, sweet	*Asperula odorata* L.	Do.
Yarrow	*Achillea millefolium* L.	In beverages only; not more than 10 p.p.m. thujone in the finished beverage.
Yucca, Joshua-tree	*Yucca brevifolia* Engelm.	
Yucca, Mohave	*Yucca schidigera* Roezl ex Ortgies (*Y. mohavensis* Sarg.).	

§ 121.1164 Synthetic flavoring substances and adjuvants.

Synthetic flavoring substances and adjuvants may be safely used in food in accordance with the following conditions.

(a) They are used in the minimum quantity required to produce their intended effect, and otherwise in accordance with all the principles of good manufacturing practice.

(b) They consist of one or more of the following, used alone or in combination with flavoring substances and adjuvants generally recognized as safe in food, prior-sanctioned for such use, or regulated by an appropriate section in Subpart D of the food additive regulations.

Acetal; acetaldehyde diethyl acetal.
Acetaldehyde phenethyl propyl acetal.
Acetanisole; 4'-methoxyacetophenone.
Adipic acid; 1,4-butanedicarboxylic acid.
Allyl anthranilate.
Allyl cinnamate.
Allyl cyclohexaneacetate.
Allyl cyclohexanebutyrate.
Allyl cyclohexanehexanoate.
Allyl cyclohexanepropionate.
Allyl cyclohexanevalerate.
Allyl disulfide.
Allyl 2-ethylbutyrate.
Allyl α-ionone; 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-1,6-heptadiene-3-one.
Allyl isothiocyanate; mustard oil.
Allyl isovalerate.
Allyl mercaptan; 2-propene-1-thiol.
Allyl nonanoate.
Allyl octanoate.
Allyl phenoxyacetate.
Allyl phenylacetate.
Allyl propionate.
Allyl sorbate; allyl 2,4-hexadienoate.
Allyl sulfide.
Allyl tiglate; allyl *trans*-2-methyl-2-butenoate.
Allyl 10-undecenoate.
Ammonium isovalerate.
Ammonium sulfide.
Amyl alcohol; pentyl alcohol.
Amyl butyrate.
α-Amylcinnamaldehyde.
α-Amylcinnamaldehyde dimethyl acetal.
α-Amylcinnamyl acetate.
α-Amylcinnamyl alcohol.
α-Amylcinnamyl formate.
α-Amylcinnamyl isovalerate.
Amyl formate.
Amyl heptanoate.
Amyl hexanoate.
Amyl octanoate.
Anisole; methoxybenzene.
Anisyl acetate.
Anisyl alcohol; *p*-methoxybenzyl alcohol.
Anisyl butyrate.
Anisyl formate.
Anisyl phenylacetate.
Anisyl propionate.
Benzaldehyde dimethyl acetal.
Benzaldehyde glyceryl acetal; 2-phenyl-*m*-dioxan-5-ol.
Benzaldehyde propylene glycol acetal; 4-methyl-2-phenyl-*m*-dioxolane.
Benzoin; 2-hydroxy-2-phenylacetophenone.
Benzophenone; diphenylketone.
Benzyl acetate.
Benzyl acetoacetate.
Benzyl alcohol.
Benzyl benzoate.
Benzyl butyrate.
Benzyl cinnamate.
Benzyl 2,3-dimethylcrotonate; benzyl methyl tiglate.
Benzyl formate.
3-Benzyl-4-heptanone; benzyl dipropyl ketone.
Benzyl isobutyrate.
Benzyl isovalerate.
Benzyl mercaptan; α-toluenethiol.
Benzyl methoxyethyl acetal; acetaldehyde benzyl β-methoxyethyl acetal.
Benzyl phenylacetate.
Benzyl propionate.
Benzyl salicylate.
Birch tar oil.
Borneol; *d*-camphanol.
Bornyl acetate.
Bornyl formate.
Bornyl isovalerate.
Bornyl valerate.
2-Butanone; methyl ethyl ketone.
Butter acids.
Butter esters.
Butter starter distillate.
Butyl acetate.
Butyl acetoacetate.
Butyl alcohol; 1-butanol.
Butyl anthranilate.
Butyl butyrate.
Butyl butyryllactate; lactic acid, butyl ester, butyrate.
α-Butylcinnamaldehyde.
Butyl cinnamate.
Butyl 2-decenoate.
Butyl formate.
Butyl heptanoate.
Butyl hexanoate.
Butyl *p*-hydroxybenzoate.
Butyl isobutyrate.
Butyl isovalerate.
Butyl lactate.
Butyl laurate.
Butyl levulinate.

Butyl phenylacetate.
Butyl propionate.
Butyl stearate.
Butyl sulfide.
Butyl 10-undecenoate.
Butyl valerate.
Butyraldehyde.
Cadinene.
Camphene; 2,2-dimethyl-3-methylenenorbornane.
d-Camphor.
Carvacrol; 2-*p*-cymenol.
Carveol; *p*-mentha-6,8-dien-2-ol.
Carvacryl ethyl ether; 2-ethoxy-*p*-cymene.
4-Carvomenthenol; 1-*p*-menthen-4-ol; 4-terpinenol.
Carvyl acetate.
Carvyl propionate.
β-Caryophyllene.
1,4-Cineole.
Cinnamaldehyde ethylene glycol acetal.
Cinnamic acid.
Cinnamyl acetate.
Cinnamyl alcohol; 3-phenyl-2-propen-1-ol.
Cinnamyl anthranilate.
Cinnamyl butyrate.
Cinnamyl cinnamate.
Cinnamyl formate.
Cinnamyl isobutyrate.
Cinnamyl isovalerate.
Cinnamyl phenylacetate.
Cinnamyl propionate.
Citral diethyl acetal; 3,7-dimethyl-2,6-octadienal diethyl acetal.
Citral dimethyl acetal; 3,7-dimethyl-2,6-octadienal dimethyl acetal.
Citronellal; 3,7-dimethyl-6-octenal; rhodinal.
Citronellol; 3,7-dimethyl-6-octen-1-ol; *d*-citronellol.
Citronelloxyacetaldehyde.
Citronellyl acetate.
Citronellyl butyrate.
Citronellyl formate.
Citronellyl isobutyrate.
Citronellyl phenylacetate.
Citronellyl propionate.
Citronellyl valerate.
p-Cresol.
Cuminaldehyde; cuminal; *p*-isopropyl benzaldehyde.
Cyclohexaneacetic acid.
Cyclohexaneethyl acetate.
Cyclohexyl acetate.
Cyclohexyl anthranilate.
Cyclohexyl butyrate.
Cyclohexyl cinnamate.
Cyclohexyl formate.
Cyclohexyl isovalerate.
Cyclohexyl propionate.
p-Cymene.
γ-Decalactone; 4-hydroxy-decanoic acid, γ-lactone.
δ-Decalactone; 5-hydroxy-decanoic acid, δ-lactone.
Decanal dimethyl acetal.
1-Decanol; decylic alcohol.
2-Decenal.
Decyl actate.
Decyl butyrate.
Decyl propionate.
Dibenzyl ether.
4,4-Dibutyl-γ-butyrolactone; 4,4-dibutyl-4-hydroxy-butyric acid, γ-lactone.
Dibutyl sebacate.
Diethyl malate.
Diethyl sebacate.
Diethyl succinate.
Diethyl tartrate.
2,5-Diethyltetrahydrofuran.
Dihydrocarveol; 8-*p*-menthen-2-ol; 6-methyl-3-isopropenylcyclohexanol.
Dihydrocarvone.
Dihydrocarvyl acetate.
m-Dimethoxybenzene.
p-Dimethoxybenzene; dimethyl hydroquinone.
2,4-Dimethylacetophenone.
α,α-Dimethylbenzyl isobutyrate; phenyldimethylcarbinyl isobutyrate.
2,6-Dimethyl-5-heptenal.
2,6-Dimethyl octanal; isodecylaldehyde.
3,7-Dimethyl-1-octanol; tetrahydrogeraniol.
α,α-Dimethylphenethyl acetate; benzylpropyl acetate; benzyldimethylcarbinyl acetate.
α,α-Dimethylphenethyl alcohol; dimethylbenzyl carbinol.
α,α-Dimethylphenethyl butyrate; benzyldimethylcarbinyl butyrate.
α,α-Dimethylphenethyl formate; benzyldimethylcarbinyl formate.
Dimethyl succinate.
1,3-Diphenyl-2-propanone; dibenzyl ketone.
delta-Dodecalactone; 5-hydroxydodecanoic acid, deltalactone.
γ-Dodecalactone; 4-hydroxydodecanoic acid, γ-lactone.
2-Dodecenal.
Estragole.
p-Ethoxybenzaldehyde.
Ethyl acetoacetate.
Ethyl 2-acetyl-3-phenylpropionate; ethylbenzyl acetoacetate.
Ethyl aconitate, mixed esters.
Ethyl acrylate.
Ethyl *p*-anisate.
Ethyl anthranilate.
Ethyl benzoate.
Ethyl benzoylacetate.
α-Ethylbenzyl butyrate; α-phenylpropyl butyrate.
2-Ethylbutyl actate.
2-Ethylbutyraldehyde.
2-Ethylbutyric acid.
Ethyl cinnamate.
Ethyl cyclohexanepropionate.
Ethyl decanoate.
Ethyl formate.
2-Ethylfuran.
Ethyl 2-furanpropionate.
4-Ethylguaiacol; 4-ethyl-2-methoxyphenol.
Ethyl heptanoate.
2-Ethyl-2-heptenal; 2-ethyl-3-butylacrolein.
Ethyl hexanoate.
Ethyl isobutyrate.
Ethyl isovalerate.
Ethyl lactate.
Ethyl laurate.
Ethyl levulinate.
Ethyl 2-methylbutyrate.
Ethyl myristate.
Ethyl nitrite.
Ethyl nonanoate.
Ethyl 2-nonynoate; ethyl octyne carbonate.
Ethyl octanoate.
Ethyl oleate.
Ethyl phenylacetate.
Ethyl 4-phenylbutyrate.
Ethyl 3-phenylglycidate.
Ethyl 3-phenylpropionate; ethyl hydrocinnamate.
Ethyl propionate.
Ethyl pyruvate.
Ethyl salicylate.
Ethyl sorbate; ethyl 2,4-hexadienoate.
Ethyl tiglate; ethyl *trans*-2-methyl-2-butenoate.
Ethyl 10-undecenoate.
Ethyl valerate.
Eucalyptol; 1,8-epoxy-*p*-menthane; cineole.
Eugenyl benzoate.
Eugenyl formate.
Eugenyl methyl ether; 4-allylveratrole; methyl eugenol.
Farnesol; 3,7,11-trimethyl-2,6,10-dodecatrien-1-ol.
d-Fenchone; *d*-1,3,3-trimethyl-2-norbornanone.
Fenchyl alcohol; 1,3,3-trimethyl-2-norbornanol.
Formic acid.
(2-Furyl)-2-propanone; furyl acetone.
1-Furyl-2-propanone; furyl acetone.
Fusel oil, refined (mixed amyl alcohols).
Geranyl acetoacetate; *trans*-3,7-dimethyl-2,6-octadien-1-yl acetoacetate.
Geranyl benzoate.
Geranyl butyrate.
Geranyl formate.
Geranyl hexanoate.
Geranyl isobutyrate.
Geranyl isovalerate.
Geranyl phenylacetate.
Geranyl propionate.
Glucose pentaacetate.
Glyceryl monooleate.
Guaiacol; *o*-methoxyphenol.
Guaiacyl phenylacetate.
γ-Heptalactone; 4-hydroxyheptanoic acid, γ-lactone.
Heptanal; enanthaldehyde.
Heptanal dimethyl acetal.
Heptanal 1,2-glyceryl acetal.
2,3-Heptanedione; acetyl valeryl.
3-Heptanol.
2-Heptanone; methyl amyl ketone.
3-Heptanone; ethyl butyl ketone.
4-Heptanone; dipropyl ketone.
Heptyl acetate.
Heptyl alcohol; enanthic alcohol.
Heptyl butyrate.
Heptyl cinnamate.
Heptyl formate.
Heptyl isobutyrate.
Heptyl octanoate.
1-Hexadecanol; cetyl alcohol.
ω-6-Hexadecenlactone; 16-hydroxy-6-hexadecenoic acid, ω-lactone; ambrettolide.
γ-Hexalactone; 4-hydroxyhexanoic acid, γ-lactone; tonkalide.
Hexanal; caproic aldehyde.
2,3-Hexanedione; acetyl butyryl.
Hexanoic acid; caproic acid.
2-Hexenal.
2-Hexen-1-ol.
3-Hexen-1-ol; leaf alcohol.
2-Hexen-1-yl acetate.
3-Hexenyl isovalerate.
3-Hexenyl 2-methylbutyrate.
Hexyl acetate.
2-Hexyl-4-acetoxytetrahydrofuran.
Hexyl alcohol.
Hexyl butyrate.
α-Hexylcinnamaldehyde.
Hexyl formate.
Hexyl hexanoate.
Hexyl isovaleratel.
Hexyl 2-methylbutyrate.
Hexyl octanoate.
Hexyl propionate.
Hydroxycitronellal; 3,7-dimethyl-7-hydroxyoctanal.
Hydroxycitronellal diethyl acetal.
Hydroxycitronellal dimethyl acetal.
Hydroxycitronellol; 3,7-dimethyl-1,7-octanediol.
N-(4-Hydroxy-3-methoxybenzyl)-nonanamide; pelargonyl vanillylamide.
5-Hydroxy-4-octanone; butyroin.
4-(*p*-Hydroxyphenyl-2-butanone; *p*-hydroxybenzyl acetone.
Indole.
α-Ionone; 4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one.
β-Ionone; 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-buten-2-one.
α-Irone; 4-(2,5,6,6-tetramethyl-2-cyclohexene-1-yl)-3-buten-2-one; 6-methylionone.
Isoamyl acetate.
Isoamyl acetoacetate.
Isoamyl alcohol; isopentyl alcohol; 3-methyl-1-butanol.
Isoamyl benzoate.
Isoamyl butyrate.
Isoamyl cinnamate.
Isoamyl formate.
Isoamyl 2-furanbutyrate; α-isoamyl furfurylpropionate.
Isoamyl 2-furanpropionate; α-isoamyl furfurylacetate.
Isoamyl hexanoate.
Isoamyl isobutyrate.
Isoamyl isovalerate.
Isoamyl laurate.
Isoamyl nonanoate.
Isoamyl octanoate.
Isoamyl phenylacetate.
Isoamyl propionate.

Isoamyl pyruvate.
Isoamyl salicylate.
Isoborneol.
Isobornyl acetate.
Isobornyl formate.
Isobornyl isovalerate.
Isobornyl propionate.
Isobutyl acetate.
Isobutyl acetoacetate.
Isobutyl alcohol.
Isobutyl angelate; isobutyl *cis*-2-methyl-2-butenoate.
Isobutyl anthranilate.
Isobutyl benzoate.
Isobutyl butyrate.
Isobutyl cinnamate.
Isobutyl formate.
Isobutyl 2-furanpropionate.
Isobutyl heptanoate.
Isobutyl hexanoate.
Isobutyl isobutyrate.
α-Isobutylphenethyl alcohol; isobutyl benzyl carbinol; 4-methyl-1-phenyl-2-pentanol.
Isobutyl phenylacetate.
Isobutyl propionate.
Isobutyl salicylate.
Isobutyraldehyde.
Isobutyric acid.
Isoeugenol; 2-methoxy-4-propenylphenol.
Isoeugenyl acetate.
Isoeugenyl ethyl ether; 2-ethoxy-5-propenylanisole; ethyl isoeugenol.
Isoeugenyl formate.
Isoeugenyl methyl ether; 4-propenylveratrole; methyl isoeugenol.
Isoeugenyl phenylacetate.
α-Isomethylionone; 4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-methyl-3-buten-2-one; methyl γ-ionone.
Isopropyl acetate.
p-Isopropylacetophenone.
Isopropyl benzoate.
p-Isopropylbenzyl alcohol; cuminic alcohol; *p*-cymen-7-ol.
Isopropyl butyrate.
Isopropyl cinnamate.
Isopropyl formate.
Isopropyl hexanoate.
Isopropyl isobutyrate.
Isopropyl isovalerate.
p-Isopropylphenylacetaldehyde; *p*-cymen-7-carboxaldehyde.
Isopropyl phenylacetate.
3-(*p* - Isopropylphenyl)-propionaldehyde; *p*-isopropylhydrocinnamaldehyde; cuminyl acetaldehyde.
Isopropyl propionate.
Isopulegol; *p*-menth-8-en-3-ol.
Isopulegone; *p*-menth-8-en-3-one.
Isopulegyl acetate.
Isoquinoline.
Isovaleric acid.
Lauric aldehyde; dodecanal.
Lauryl acetate.
Lauryl alcohol; 1-dodecanol.
Levulinic acid.
Linalyl anthranilate; 3,7-dimethyl-1, 6-octadien-3-yl anthranilate.
Linalyl benzoate.
Linalyl butyrate.
Linalyl formate.
Linalyl hexanoate.
Linalyl isobutyrate.
Linalyl isovalerate.
Linalyl octanoate.
Linalyl propionate.
Maltol, 3-hydroxy-2-methyl-4H-pyran-4-one.
p-Mentha-1,8-dien-7-ol; perillyl alcohol.
p-Menth-3-en-1-ol.
Menthol; 2-isopropyl-5-methylcyclohexanol.
Menthone; *p*-menthan-3-one.
Menthyl acetate; *p*-menth-3-yl acetate.
Menthyl isovalerate; *p*-menth-3-yl isovalerate.
o-Methoxybenzaldehyde.
p-Methoxybenzaldehyde; *p*-anisaldehyde.
o-Methoxycinnamaldehyde.
2-Methoxy-4-methylphenol; 4-methylguaiacol; 2-methoxy-*p*-cresol.
4-(*p*-Methoxyphenyl)-2-butanone; anisyl acetone.
1-(*p*-Methoxyphenyl)-1-penten-3-one; α-methylanisylidene acetone; ethone.
1-(*p*-Methoxyphenyl)-2-propanone; anisyl methyl ketone; anisic ketone.
2-Methoxy-4-vinylphenol; *p*-vinylguaiacol.
Methyl acetate.
4′-Methylacetophenone; *p*-methylacetophenone; methyl *p*-tolyl ketone.
2-Methylallyl butyrate; 2-methyl-2-propen-1-yl butyrate.
Methyl anisate.
o-Methylanisole; *o*-cresyl methyl ether.
p-Methylanisole; *p*-cresyl methyl ether; *p*-methoxytoluene.
Methyl benzoate.
α-Methylbenzyl acetate; styralyl acetate.
α-Methylbenzyl alcohol; styralyl alcohol.
α-Methylbenzyl butyrate; styralyl butyrate.
α-Methylbenzyl isobutyrate; styralyl isobutyrate.
α-Methylbenzyl formate; styralyl formate.
α-Methylbenzyl propionate; styralyl propionate.
2-Methylbutyl isovalerate.
Methyl *p*-*tert*-butylphenylacetate.
2-Methylbutyraldehyde; methyl ethyl acetaldehyde.
3-Methylbutyraldehyde; isovaleraldehyde.
Methyl butyrate.
2-Methylbutyric acid.
α-Methylcinnamaldehyde.
Methyl cinnamate.
2-Methyl-1,3-cyclohexadiene.
Methylcyclopentenolone; 3-methylcyclopentane-1,2-dione.
Methyl heptanoate.
2-Methylheptanoic acid.
6-Methyl-5-hepten-2-one.
Methyl hexanoate.
Methyl 2-hexenoate.
Methyl *p*-hydroxybenzoate; methylparaben.
Methyl α-ionone; 5-(2,6,6-trimethyl-2-cyclohexen-1-yl)-4-penten-3-one.
Methyl β-ionone; 5-(2,6,6-trimethyl-1-cyclohexen-1-yl)-4-penten-3-one.
Methyl δ-ionone; 5-(2,6,6-trimethyl-3-cyclohexen-1-yl)-4-penten-3-one.
Methyl isobutyrate.
2-Methyl-3-(*p*-isopropylphenyl)-propionaldehyde; α-methyl-*p*-isopropylhydrocinnamaldehyde; cyclamen aldehyde.
Methyl isovalerate.
Methyl laurate.
Methyl mercaptan; methanethiol.
Methyl *o*-methoxybenzoate.
Methyl *N*-methylanthranilate; dimethyl anthranilate.
Methyl 2-methylbutyrate.
Methyl 2-methylthiopropionate.
Methyl 4-methylvalerate.
Methyl myristate.
Methyl β-naphthyl ketone; 2′-acetonaphthone.
Methyl nonanoate.
Methyl 2-nonenoate.
Methyl 2-nonynoate; methyloctyne carbonate.
2-Methyloctanal; methyl hexyl acetaldehyde.
Methyl octanoate.
Methyl 2-octynoate; methyl heptine carbonate.
4-Methyl-2,3-pentanedione; acetyl isobutyryl.
4-Methyl-2-pentanone; methyl isobutyl ketone.
β-Methylphenethyl alcohol; hydratropyl alcohol.
Methyl phenylacetate.
3-Methyl-4-phenyl-3-butene-2-one.
2-Methyl-4-phenyl-2-butyl acetate; dimethylphenylethyl carbinyl acetate.
2-Methyl-4-phenyl-2-butyl isobutyrate; dimethylphenyl-ethylcarbinyl isobutyrate.
3-Methyl-2-phenylbutyraldehyde; α-isopropyl phenylacetaldehyde.
Methyl 4-phenylbutyrate.
4-Methyl-1-phenyl-2-pentanone; benzyl isobutyl ketone.
Methyl 3-phenylpropionate; methyl hydrocinnamate.
Methyl propionate.
Methyl sulfide.
3-Methylthiopropionaldehyde; methional.
2-Methyl-3-tolylpropionaldehyde, mixed *o*-, *m*-, *p*-.
2-Methylundecanal; methyl nonyl acetaldehyde.
Methyl 9-undecenoate.
Methyl 2-undecynoate; methyl decyne carbonate.
Methyl valerate.
2-Methylvaleric acid.
Myrcene; 7-methyl-3-methylene-1,6-octadiene.
Myristaldehyde; tetradecanal.
d-Neomenthol; 2-isobutyl-5-methylcyclohexanol.
Nerol; *cis*-3,7-dimethyl-2,6-octadien-1-ol.
Nerolidol; 3,7,11-trimethyl-1,6,10-dodecatrien-3-ol.
Neryl acetate.
Neryl butyrate.
Neryl formate.
Neryl isobutyrate.
Neryl isovalerate.
Neryl propionate.
2,6-Nonadien-1-ol.
γ-Nonalactone; 4-hydroxynonanoic acid, γ-lactone; aldehyde C–18.
Nonanal; pelargonic aldehyde.
1,3-Nonanediol acetate, mixed esters.
Nonanoic acid; pelargonic acid.
2-Nonanone; methylheptyl ketone.
3-Nonanon-1-yl acetate; 1-hydroxy-3-nonanone acetate.
Nonyl acetate.
Nonyl alcohol; 1-nonanol.
Nonyl octanoate.
Nonyl isovalerate.
γ-Octalactone; 4-hydroxyoctanoic acid, γ-lactone.
Octanal; caprylaldehyde.
Octanal dimethyl acetal.
Octanoic acid; caprylic acid.
1-Octanol; octyl alcohol.
2-Octanol.
3-Octanol.
2-Octanone; methyl hexyl ketone.
3-Octanone; ethyl amyl ketone.
3-Octanon-1-ol.
1-Octen-3-ol; amyl vinyl carbinol.
1-Octen-3-yl acetate.
Octyl acetate.
3-Octyl acetate.
Octyl butyrate.
Octyl formate.
Octyl heptanoate.
Octyl isobutyrate.
Octyl isovalerate.
Octyl octanoate.
Octyl phenylacetate.
Octyl propionate.
ω-Pentadecalactone; 15-hydroxypentadecanoic acid, ω-lactone; pentadecanolide; angelica lactone.
2,3-Pentanedione; acetyl propionyl.
2-Pentanone; methyl propyl ketone.
4-Pentenoic acid.
1-Penten-3-ol.
α-Phellandrene; *p*-mentha-1,5-diene.
Phenethyl acetate.
Phenethyl alcohol; β-phenylethyl alcohol.
Phenethyl anthranilate.
Phenethyl benzoate.
Phenethyl butyrate.
Phenethyl cinnamate.
Phenethyl formate.
Phenethyl isobutyrate.
Phenethyl isovalerate.
Phenethyl 2-methylbutyrate.
Phenethyl phenylacetate.
Phenethyl propionate.
Phenethyl salicylate.
Phenethyl senecioate; phenethyl 3,3-dimethylacrylate.

Phenethyl tiglate.
Phenoxyacetic acid.
2-Phenoxyethyl isobutyrate.
Phenylacetaldehyde; α-toluic aldehyde.
Phenylacetaldehyde 2,3-butylene glycol acetal.
Phenylacetaldehyde dimethyl acetal.
Phenylacetaldehyde glyceryl acetal.
Phenylacetic acid; α-toluic acid.
4-Phenyl-2-butanol; phenylethyl methyl carbinol.
4-Phenyl-3-buten-2-ol; methyl styryl carbinol.
4-Phenyl-3-buten-2-one.
4-Phenyl-2-butyl acetate; phenylethyl methyl carbinyl acetate.
1-Phenyl-3-methyl-3-pentanol; phenylethyl methyl ethyl carbinol.
1-Phenyl-1-propanol; phenylethyl carbinol.
3-Phenyl-1-propanol; hydrocinnamyl alcohol.
2-Phenylpropionaldehyde; hydratropaldehyde.
3-Phenylpropionaldehyde; hydrocinnamaldehyde.
2-Phenylpropionaldehyde dimethyl acetal; hydratropic aldehyde dimethyl acetal.
3-Phenylpropionic acid; hydrocinnamic acid.
3-Phenylpropyl acetate.
2-Phenylpropyl butyrate.
3-Phenylpropyl cinnamate.
3-Phenylpropyl formate.
3-Phenylpropyl hexanoate.
2-Phenylpropyl isobutyrate.
3-Phenylpropyl isobutyrate.
3-Phenylpropyl isovalerate.
3-Phenylpropyl propionate.
2-(3-Phenylpropyl)-tetrahydrofuran.
α-Pinene; 2-pinene.
β-Pinene; 2(10)-pinene.
Pine tar oil.
Piperidine.
Piperine.
d-Piperitone; *p*-menth-1-en-3-one.
Piperonyl acetate; heliotropyl acetate.
Piperonyl isobutyrate.
Polylimonene.
Polysorbate 20; polyoxyethylene (20) sorbitan monolaurate.
Polysorbate 60; polyoxyethylene (20) sorbitan monostearate.
Polysorbate 80.
Potassium acetate.
Propenylguaethol; 6-ethoxy-*m*-anol.
Propionaldehyde.
Propyl acetate.
Propyl alcohol; 1-propanol.
p-Propyl anisole; dihydroanethole.
Propyl benzoate.
Propyl butyrate.
Propyl cinnamate.
Propyl disulfide.
Propyl formate.
Propyl 2-furanacrylate.
Propyl heptanoate.
Propyl hexanoate.
Propyl *p*-hydroxybenzoate; propylparaben.
Propyl isobutyrate.
Propyl isovalerate.
Propyl mercaptan.
α-Propylphenethyl alcohol.
Propyl phenylacetate.
Propyl propionate.
Pulegone; *p*-menth-4(8)-en-3-one.
Pyridine.
Pyroligneous acid extract.
Pyruvaldehyde.
Pyruvic acid.
Rhodinol; 3,7-dimethyl-7-octen-1-ol; *l*-citronellol.
Rhodinyl acetate.
Rhodinyl butyrate.
Rhodinyl formate.
Rhodinyl isobutyrate.
Rhodinyl isovalerate.
Rhodinyl phenylacetate.
Rhodinyl propionate.
Rum ether; ethyl oxyhydrate.
Salicylaldehyde.
Santalol, α and β.
Santalyl acetate.
Santalyl phenylacetate.
Skatole.
Sorbitan monostearate.
Sucrose octaacetate.
α-Terpinene.
γ-Terpinene.
α-Terpineol; *p*-menth-1-en-8-ol.
β-Terpineol.
Terpinolene; *p*-menth-1,4(8)-diene.
Terpinyl acetate.
Terpinyl anthranilate.
Terpinyl butyrate.
Terpinyl cinnamate.
Terpinyl formate.
Terpinyl isobutyrate.
Terpinyl isovalerate.
Terpinyl propionate.
Tetrahydrofurfuryl acetate.
Tetrahydrofurfuryl alcohol.
Tetrahydrofurfuryl butyrate.
Tetrahydrofurfuryl propionate.
Tetrahydro-pseudo-ionone; 6,10-dimethyl-9-undecen-2-one.
Tetrahydrolinalool; 3,7-dimethyloctan-3-ol.
2-Thienyl mercaptan; 2-thienylthiol.
Thymol.
Tolualdehyde glyceryl acetal, mixed *o*, *m*, *p*.
Tolualdehydes, mixed *o*, *m*, *p*.
p-Tolylacetaldehyde.
o-Tolyl acetate; *o*-cresyl acetate.
p-Tolyl acetate; *p*-cresyl acetate.
4-(*p*-Tolyl)-2-butanone; *p*-methylbenzylacetone.
p-Tolyl isobutyrate.
p-Tolyl laurate.
p-Tolyl phenylacetate.
2-(*p*-Tolyl)-propionaldehyde; *p*-methylhydratropic aldehyde.
Tributyl acetylcitrate.
2-Tridecenal.
2,3-Undecadione; acetyl nonyryl.
γ-Undecalactone; 4-hydroxyundecanoic acid γ-lactone; peach aldehyde; aldehyde C–14.
Undecenal.
2-Undecanone; methyl nonyl ketone.
9-Undecenal; undecenoic aldehyde.
10-Undecenal.
10-Undecen-1-yl acetate.
Undecyl alcohol.
Valeraldehyde; pentanal.
Valeric acid; pentanoic acid.
Vanillin acetate; acetyl vanillin.
Veratraldehyde.
Zingerone; 4-(4-hydroxy-3-methoxyphenyl)-2-butanone.

(c) δ-Decalactone and δ-dodecalactone when used separately or in combination in oleomargarine are used at levels not to exceed 10 parts per million and 20 parts per million, respectively, in accordance with § 45.1 of this chapter.

§ 121.1165 Rhizopus oryzae.

Carbohydrase from *Rhizopus oryzae* may be safely used in the production of dextrose from starch in accordance with the following prescribed conditions:

(a) *Rhizopus oryzae* is classified as follows: Class, *Phycomycetes;* order, *Mucorales;* family, *Mucoraceae;* genus, *Rhizopus;* species, *Rhizopus oryzae.*

(b) The strain of *Rhizopus oryzae* is nonpathogenic and nontoxic.

(c) The carbohydrase is produced under controlled conditions to maintain nonpathogenicity and nontoxicity, including the absence of aflatoxin.

(d) The carbohydrase is produced by a process which completely removes the organism *Rhizopus oryzae* from the carbohydrase product.

(e) The carbohydrase is maintained under refrigeration from production to use and is labeled to include the necessity of refrigerated storage.

§ 121.1166 Petrolatum.

Petrolatum may be safely used in food, subject to the provisions of this section.

(a) Petrolatum complies with the specifications set forth in the U.S. Pharmacopeia XVI for white petrolatum or in The National Formulary XII for yellow petrolatum.

(b) Petrolatum meets the following ultraviolet absorbance limits when subjected to the analytical procedure described in § 121.1156(b):

Ultraviolet absorbance per centimeter path length:

Millimicrons:	*Maximum*
280–289	0.25
290–299	.20
300–359	.14
360–400	.04

(c) Petrolatum is used or intended for use as follows:

Use	*Limitation (inclusive of all petroleum hydrocarbons that may be used in combination with petrolatum)*
In bakery products; as release agent and lubricant.	With white mineral oil, not to exceed 0.15 percent of bakery product.
In dehydrated fruits and vegetables; as release agent.	Not to exceed 0.02 percent of dehydrated fruits and vegetables.
In egg white solids; as release agent	Not to exceed 0.1 percent of egg white solids.
On raw fruits and vegetables; as protective coating.	In an amount not to exceed good manufacturing practice.
In beet sugar and yeast; as defoaming agent.	As prescribed in § 121.1099.

(d) Petrolatum may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the act, in an amount not greater than that required to produce its intended effect.

§ 121.1167 Dimetridazole.

A tolerance of zero is established for residues of dimetridazole in the uncooked edible tissues, byproducts, and eggs of turkeys.

§ 121.1168 3,5-Dinitrobenzamide.

A tolerance of zero is established for residues of 3,5-dinitrobenzamide and its metabolites in the edible tissues and byproducts of chickens.

§ 121.1169 Acetyl(*p*-nitrophenyl)sulfanilamide.

A tolerance of zero is established for residues of acetyl(*p*-nitrophenyl)sulfanilamide and its metabolites in the edible tissues and byproducts of chickens.

§ 121.1170 Bacterial catalase.

Bacterial catalase derived from *Micrococcus lysodeikticus* by a pure culture fermentation process may be safely used in destroying and removing hydrogen peroxide used in the manufacture of cheese, in accordance with the following conditions.

(a) The organism *Micrococcus lysodeikticus* from which the bacterial catalase is to be derived is demonstrated to be nontoxic and nonpathogenic.

(b) The organism *Micrococcus lysodeikticus* is removed from the bacterial catalase prior to use of the bacterial catalase.

(c) The bacterial catalase is used in an amount not in excess of the minimum required to produce its intended effect.

§ 121.1171 Sodium methyl sulfate.

Sodium methyl sulfate may be present in pectin in accordance with the following conditions.

(a) It is present as the result of methylation of pectin by sulfuric acid and methyl alcohol and subsequent treatment with sodium bicarbonate.

(b) It does not exceed 0.1 percent by weight of the pectin.

§ 121.1172 Malathion.

The food additive malathion may be safely used for the control of insects in accordance with the following prescribed conditions:

(a) It is incorporated into paper trays in amounts not exceeding 200 milligrams per square foot.

(b) Treated paper trays are intended for use only in the drying of grapes (raisins).

(c) Total residues of malathion on processed, ready-to-eat raisins from drying on treated trays and from application to grapes before harvest shall not exceed 8 parts per million.

§ 121.1173 Dienestrol diacetate.

(a) A tolerance of zero is established for residues of dienestrol diacetate in the uncooked edible tissues and byproducts of chickens and turkeys.

(b) The method of examination prescribed for the quantitative determination of dienestrol diacetate is as follows: Incorporate the finely ground tissues in the diet of immature mice, and assay by the mouse uterine weight method of E. J. Umberger, G. H. Gass, and J. M. Curtis, published in Endocrinology, volume 63, page 806 (1958).

§ 121.1174 Arabinogalactan.

Arabinogalactan may be safely used in food in accordance with the following conditions:

(a) Arabinogalactan is a polysaccharide extracted by water from Western larch wood, having galactose units and arabinose units in the approximate ratio of six to one.

(b) It is used in the following foods in the minimum quantity required to produce its intended effect as an emulsifier, stabilizer, binder, or bodying agent: Essential oils, nonnutritive sweeteners, flavor bases, nonstandardized dressings, and pudding mixes.

§ 121.1175 Chlorhexidine.

A tolerance of zero is established for residues of chlorhexidine in edible tissues of calves.

§ 121.1176 1,3-Butylene glycol.

1,3-Butylene glycol (1,3-butanediol) may be safely used in food in accordance with the following prescribed conditions:

(a) The substance meets the following specifications:

(1) 1,3-Butylene glycol content: Not less than 99 percent.

(2) Specific gravity at 20/20° C.: 1.004 to 1.006.

(3) Distillation range: 200°–215° C.

(b) It is used in the minimum amount required to perform its intended effect.

(c) It is used as a solvent for natural and synthetic flavoring substances except where standards of identity issued under section 401 of the act preclude such use.

§ 121.1177 2-Chloro-4-nitrobenzamide.

A tolerance of zero is established for residues of 2-chloro-4-nitrobenzamide and its metabolites in the edible tissues and byproducts of chickens.

§ 121.1179 Coatings on fresh citrus fruit.

Coatings may be applied to fresh citrus fruit for protection of the fruit in accordance with the following conditions:

(a) The coating is applied in the minimum amount required to accomplish the intended effect.

(b) The coating may be formulated from the following components, each used in the minimum quantity required to accomplish the intended effect:

(1) Substances generally recognized as safe for the purpose or previously sanctioned for the purpose.

(2) One or more of the following:

Component	*Limitations*
Fatty acids	Complying with § 121.1070.
Partially hydrogenated rosin	Catalytically hydrogenated to a maximum refractive index of 1.5012 at 100° C. Color of WG or paler.
Pentaerythritol ester of maleic anhydride - modified wood rosin.	Acid number of 134–145; drop-softening point of 127° C–137° C. saponification number of less than 280; and a color of M or paler.
Sodium lauryl sulfate	Complying with § 121.1012. As a film former.
Wood rosin	Color of K or paler.

§ 121.1180 Ion-exchange membranes.

Ion-exchange membranes may be safely used in the processing of food under the following prescribed conditions:

(a) The ion-exchange membrane is prepared by subjecting a polyethylene base conforming to § 121.2510 to polymerization with styrene until the polystyrene phase of the base is not less than 16 percent nor more than 30 percent by weight. The base is then modified by reaction with chloromethyl methyl ether, and by subsequent amination with trimethylamine, dimethylamine, diethylenetriamine, or dimethylethanolamine.

(b) The ion-exchange membrane is manufactured so as to comply with the following extraction limitations when subjected to the described procedure: Separate square-foot samples of membrane weighing approximately 14 grams each are cut into small pieces and refluxed for 4 hours in 150 cubic centimeters of the following solvents: Distilled water, 5 percent acetic acid, and 50 percent alcohol. Extraction from each sample will not exceed 0.4 percent by weight of sample.

(c) The ion-exchange membrane will be used in the production of grapefruit juice to adjust the ratio of citric acid to total solids of the grapefruit juice produced.

§ 121.1181 Chloropentafluoroethane.

The food additive chloropentafluoroethane may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive has a purity of not less than 99.97 percent, and contains not more than 200 parts per million saturated fluoro compounds and 10 parts per million unsaturated fluoro compounds as impurities.

(b) The additive is used or intended for use alone or with one or more of the following substances: Carbon dioxide nitrous oxide, propane, and octafluorocyclobutane complying with § 121.1065, as a propellant and aerating agent for foamed or sprayed food products except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive:

(1) The label of the food additive container shall bear, in addition to the other information required by the act, the following:

(i) The name of the additive, chloropentafluoroethane, with or without the parenthetical name "Food Propellant 115."

(ii) The percentage of the additive present in the case of a mixture.

(iii) The designation "food grade."

(2) The label or labeling of the food additive container shall bear adequate directions for use.

§ 121.1182 Odorless light petroleum hydrocarbons.

Odorless light petroleum hydrocarbons may be safely used in food, in accordance with the following prescribed conditions:

(a) The additive is a mixture of liquid hydrocarbons derived from petroleum or synthesized from petroleum gases. The additive is chiefly paraffinic, isoparaffinic, or naphthenic in nature.

(b) The additive meets the following specifications:

(1) Odor is faint and not kerosenic.

(2) Initial boiling point is 300° F. minimum.

(3) Final boiling point is 650° F. maximum.

(4) Ultraviolet absorbance limits determined by method specified in § 121.2589(b)(1)(ii), as follows:

Wavelength	Maximum absorbance per centimeter optical pathlength
mμ	
280-289	4.0
290-299	3.3
300-329	2.3
330-360	0.8

(c) The additive is used as follows:

Use	Limitations
As a defoamer in processing beet sugar and yeast.	Complying with § 121.1099.
As a float on fermentation fluids in the manufacture of vinegar and wine to prevent or retard access of air, evaporation, and wild yeast contamination during fermentation.	In an amount not to exceed good manufacturing practice.
In the froth-flotation cleaning of vegetables.	Do.

§ 121.1183 Sodium stearyl fumarate.

Sodium stearyl fumarate may be safely used in food in accordance with the following conditions:

(a) It contains not less than 99 percent sodium stearyl fumarate calculated on the anhydrous basis, and not more than 0.25 percent sodium stearyl maleate.

(b) It is used as a dough conditioner in yeast-leavened bakery products in an amount not to exceed 0.5 percent by weight of the flour used.

§ 121.1184 Ethylenediamine.

A tolerance of zero is established for residues of ethylenediamine in milk.

§ 121.1185 Polyethylene glycol 400.

A tolerance of zero is established for residues of polyethylene glycol 400 in milk.

§ 121.1186 *n*-Heptyl *p*-hydroxybenzoate.

n-Heptyl *p*-hydroxybenzoate may be safely used in fermented malt beverages to inhibit microbiological spoilage, in amounts not to exceed 12 parts per million.

Subpart E—Substances for Which Prior Sanctions Have Been Granted

§ 121.2001 Substances employed in the manufacture of food-packaging materials.

Prior to the enactment of the food additives amendment to the Federal Food, Drug, and Cosmetic Act, sanctions were granted for the usage of the following substances in the manufacture of packaging materials. So used, these substances are not considered "food additives" within the meaning of section 201(s) of the act, provided that they are of good commercial grade, are suitable for association with food, and are used in accordance with good manufacturing practice. For the purpose of this section, good manufacturing practice for food-packaging materials includes the restriction that the quantity of any of these substances which becomes a component of food as a result of use in food-packaging materials shall not be intended to accomplish any physical or technical effect in the food itself, shall be reduced to the least amount reasonably possible, and shall not exceed any limit specified in this section:

(a) *Antioxidants (limit of addition to food, 0.005 percent).*

Butylated hydroxyanisole.
Butylated hydroxytoluene.
Dilauryl thiodipropionate.
Distearyl thiodipropionate.
Gum guaiac.
Nordihydroguairetic acid.
Propyl gallate.
Thiodipropionic acid.
2,4,5-Trihydroxy butyrophenone.

(b) *Antimycotics.*

Calcium propionate.
Methylparaben (methyl *p*-hydroxybenzoate).
Propylparaben (propyl *p*-hydroxybenzoate).
Sodium benzoate.
Sodium propionate.
Sorbic acid.

(c) *Driers.*

Cobalt caprylate.
Cobalt linoleate.
Cobalt naphthenate.
Cobalt tallate.
Iron caprylate.
Iron linoleate.
Iron naphthenate.
Iron tallate.
Manganese caprylate.
Manganese linoleate.
Manganese naphthenate.
Manganese tallate.

(d) *Drying oils (as components of finished resins).*

Chinawood oil (tung oil).
Dehydrated castor oil.
Linseed oil.
Tall oil.

(e) *Plasticizers.*

Acetyl tributyl citrate.
Acetyl triethyl citrate.
p-tert-Butylphenyl salicylate.
Butyl stearate.
Butylphthalyl butyl glycolate.
Dibutyl sebacate.
Di-(2-ethylhexyl) phthalate (for foods of high water content only).
Diethyl phthalate.
Diisobutyl adipate.
Diisooctyl phthalate (for foods of high water content only).
Diphenyl-2-ethylhexyl phosphate.
Epoxidized soybean oil (iodine number maximum 6; and oxirane oxygen, minimum, 6.0 percent).
Ethylphthalyl ethyl glycolate.
Glycerol monooleate.
Monoisopropyl citrate.
Mono, di-, and tristearyl citrate.
Triacetin (glycerol triacetate).
Triethyl citrate.
3-(2-Xenoyl)-1,2-epoxypropane.

(f) *Release agents.*

Dimethylpolysiloxane (substantially free from hydrolyzable chloride and alkoxy groups, no more than 18 percent loss in weight after heating 4 hours at 200° c.; viscosity 300 centistokes, 600 centistokes at 25° C., specific gravity 0.96 to 0.97 at 25° C., refractive index 1.400 to 1.404 at 25° C.)
Linoleamide (linoleic acid amide).
Oleamide (oleic acid amide).
Palmitamide (palmitic acid amide).
Polyethylene glycol 400.
Polyethylene glycol 1500.
Polyethylene glycol 4000.
Stearamide (stearic acid amide).

(g) *Stabilizers.*

Aluminum mono-, di-, and tristearate.
Ammonium citrate.
Ammonium potassium hydrogen phosphate.
Calcium acetate.
Calcium carbonate.
Calcium glycerophospate.
Calcium phosphate.
Calcium hydrogen phosphate.
Calcium oleate.
Calcium ricinoleate.
Calcium stearate.
Disodium hydrogen phosphate.
Magnesium glycerophosphate.
Magnesium stearate.
Magnesium phosphate.
Magnesium hydrogen phosphate.
Mono-, di-, and trisodium citrate.
Mono-, di-, and tripotassium citrate.
Potassium oleate.
Potassium stearate.
Sodium pyrophosphate.
Sodium stearate.
Sodium tetrapyrophosphate.

Tin stearate (not to exceed 50 parts per million tin as a migrant in finished food).

Zinc orthophosphate (not to exceed 50 parts per million zinc as a migrant in finished food).

Zinc resinate (not to exceed 50 parts per million zinc as a migrant in finished food).

(h) *Substances used in the manufacture of paper and paperboard products used in food packaging.*

Aliphatic polyoxyethylene ethers.*

1-Alkyl (C_6-C_{18})-amino-3-aminopropane monoacetate.*

Borax or boric acid for use in adhesives, sizes, and coatings.*

Butadiene-styrene copolymer.

Chromium complex of perfluoro-octane sulfonyl glycine for use on paper and paperboard which is waxed.*

Disodium cyanodithioimidocarbamate with ethylene diamine and potassium *N*-methyl dithiocarbamate and/or sodium 2-mercaptobenzothiazole (slimicides).*

Ethyl acrylate and methyl methacrylate copolymers of itaconic acid or methacrylic acid for use only on paper and paperboard which is waxed.*

Hexamethylene tetramine as a setting agent for protein, including casein.*

1-(2-Hydroxyethyl)-1-(4-chlorobutyl)-2-alkyl (C_6-C_{17}) imidazolinium chloride.*

Itaconic acid (polymerized).

Melamine formaldehyde polymer.

Methyl acrylate (polymerized).

Methyl ethers or mono-, di-, and tripropylene glycol.*

Myristo chromic chloride complex.

Nitrocellulose.

Polyethylene glycol 400.

Polyvinyl acetate.

Potassium pentachlorophenate as a slime control agent.*

Potassium trichlorophenate as a slime control agent.*

Pyrethrins in combination with piperonyl butoxide in outside plies of multiwall bags.*

Resins from high and low viscosity polyvinyl alcohol for fatty foods only.

Rubber hydrochloride.

Sodium pentachlorophenate as a slime control agent.*

Sodium trichlorophenate as a slime control agent.*

Stearato-chromic chloride complex.

Titanium dioxide.*

Urea formaldehyde polymer.

Vinylidine chlorides (polymerized).

(Sec. 409, 72 Stat. 1786; 21 U.S.C. 348)

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*Under the conditions of normal use, these substances would not reasonably be expected to migrate to food, based on available scientific information and data.

Subpart F—Food Additives Resulting From Contact With Containers or Equipment and Food Additives Otherwise Affecting Food

AUTHORITY: The provisions of this Subpart F issued under sec. 409, 72 Stat. 1785; 21 U.S.C. 348.

§ 121.2500 General provisions applicable to Subpart F.

(a) Regulations prescribing conditions under which food additive substances may be safely used predicate usage under conditions of good manufacturing practice. For the purpose of this Subpart F, good manufacturing practice shall be defined to include the following restrictions:

(1) The quantity of any food additive substance that may be added to food as a result of use in articles that contact food shall not exceed, where no limits are specified, that which results from use of the substance in an amount not more than reasonably required to accomplish the intended physical or technical effect in the food-contact article; shall not exceed any prescribed limitations; and shall not be intended to accomplish any physical or technical effect in the food itself, except as such may be permitted by regulations in this Part 121.

(2) Any substance used as a component of articles that contact food shall be of a purity suitable for its intended use.

(b) The existence in this Subpart F of a regulation prescribing safe conditions for the use of a substance as an article or component of articles that contact food shall not be construed to relieve such use of the substance or article from compliance with any other provision of the Federal Food, Drug, and Cosmetic Act. For example, if a regulated food-packaging material were found on appropriate test to impart odor or taste to a specific food product such as to render it unfit within the meaning of section 402(a)(3) of the act, the regulation would not be construed to relieve such use from compliance with section 402(a)(3).

(c) The existence in this Subpart F of a regulation prescribing safe conditions for the use of a substance as an article or component of articles that contact food shall not be construed as implying that such substance may be safely used as a direct additive in food.

(d) Substances that under conditions of good manufacturing practice may be safely used as components of articles that contact food include the following, subject to any prescribed limitations:

(1) Substances generally recognized as safe in or on food.

(2) Substances generally recognized as safe for their intended use in food packaging.

(3) Substances used in accordance with a prior sanction or approval.

(4) Substances permitted for use by regulations in this Subpart F.

§ 121.2501 Polypropylene.

The food additive polypropylene may be present in food when its presence therein is in accordance with the following prescribed conditions:

(a) It is present as a result of contact with polypropylene used in container or equipment material.

(b) The polypropylene has been manufactured by the catalytic polymerization of propylene and specially prepared as a food-packaging grade to meet the following specifications when tested by the analytical methods described in paragraph (c) of this section:

(1) The polypropylene is completely soluble in decahydronaphthalene at 160° C., with a maximum soluble fraction of 13.4 percent after cooling to 25° C.

(2) The polypropylene is completely soluble in xylene at 120° C., with a maximum soluble fraction of 9.8 percent after cooling to 25° C.

(3) The polypropylene has a maximum extractable fraction of 3.6 percent when extracted with ethyl acetate at reflux temperature.

(4) The polypropylene has a maximum extractable fraction of 6.4 percent when extracted with *n*-hexane at reflux temperature.

(5) The polypropylene contains no other components that are food additives as so defined, unless authorized by specific regulations in this Part 121.

(c) The analytical methods for determining that polypropylene conforms to the specifications prescribed in this section are as follows and are applicable to the basic polypropylene polymer in the form of flake or powder:

(1) *Qualitative tests*—(i) *Infrared identification.* Polypropylene can be determined by its characteristic infrared spectrum.

(ii) *Melting point.* Its melting point is 160° C.–180° C. on a hot stage apparatus. (The use of crossed nicol prisms with a microscope hot stage and reading of the thermometer when the birefringence disappears increases the accuracy.)

(iii) *Density.* Its density is 0.880–0.913 at 23° C., determined by weighing first in air and then in methyl alcohol a 1.0–1.5-inch square film or slab prepared from the flake or powder.

(2) *Quantitative tests*—(i) *Method I—Decahydronaphthalene or xylene soluble fraction.*

A. Solution Preparation:

A sample is dissolved completely in decahydronaphthalene or xylene by heating and stirring in a closed system under nitrogen atmosphere to prevent degradation. The solution is allowed to cool, whereupon the insoluble portion of the sample precipitates, is filtered off, and the total-solids content of the filtrate determined as a measure of the decahydronaphthalene or xylene-soluble fraction.

Apparatus. 1. Polymerization tubes, 7-inch vials, with neck tooled for crown cap.

2. Crown bottle caps (standard metal beverage cap, without liner). Perforate with two ⅛-inch holes.

3. Rubber liner for crown bottle caps. Extract with benzene in Soxhlet extractor until extract is colorless (several days).

4. Ball bearings, steel, ⅜-inch.

5. Magnet, 4,000–5,000 gauss permanent magnet.

6. Heating block, aluminum, with wells of sufficient size to immerse polymerization tubes to a depth of 3 or 4 inches, and maintained at 120° ± 5° C. or 160° ± 5° C.

7. Funnel, Buchner type with coarse-porosity fritted disc, 30 millimeters to 60 millimeters diameter.

8. Bottle capper (any household bottle capper with wooden block to hold the polymerization tubes).

Reagents. 1. Decahydronaphthalene containing 20 milligrams of antioxidant per liter—Dissolve 0.020 gram of phenyl-β-naphthylamine in 1 liter of technical grade decahydronaphthalene.

2. Xylene containing 20 milligrams of antioxidant per liter—Dissolve 0.020 gram of *N*-phenyl-β-naphthylamine in 1 liter of industrial grade xylene, specific gravity $\frac{20^\circ\ C.}{20^\circ\ C.}$ 0.856–0.867, boiling range 123° C.–160° C.

Procedure. Weigh a 0.4 gram-0.5 gram sample, to the nearest 0.001 gram, into a 7-inch polymerization tube. Add a ⅜-inch steel ball bearing and, with a pipet, 20 milliliters of decahydronaphthalene or xylene containing antioxidant.

Close the tube with a crown cap with rubber liner, connect to a vacuum line by means of a hypodermic needle, evacuate, and refill with nitrogen at atmospheric pressure. Stir the solution by moving the tube up and down between the poles of the permanent magnet, thus raising and lowering the ball bearing in the solution.

Place the tubes in the wells of the heating block (maintained at 120° C. for xylene and at 160° C. for decahydronaphthalene) removing them at about 10-minute intervals and stirring for about 1 minute by means of the magnet and ball bearing. Alternate heating and stirring until the solution is complete with no gel particles. Observe the solution carefully since the gel particles are almost invisible; hold the tube almost horizontally and rotate but avoid undue contact of the solution with the rubber liner. Then allow the tube to stand in the air for a minimum of 1 hour and a maximum of 2 hours to cool and permit precipitation of the insoluble portion.

Uncap the polymerization tube and pour the contents into a coarse-porosity fritted-glass funnel. Apply suction with a water aspirator and draw at least 12 milliliters to 13 milliliters of filtrate through. Some samples filter rather slowly, and sometimes less than 10 milliliters is obtained. If the filtration is slow, it should be discontinued after 5 to 10 minutes, and a portion less than 10 milliliters used for the total solids determination. (Slow filtration may be due to failure to thoroughly clean the funnel from a previous determination.)

Determine the total solids on a 10-milliliter portion or less as described in section B.

B. Total solids determination:

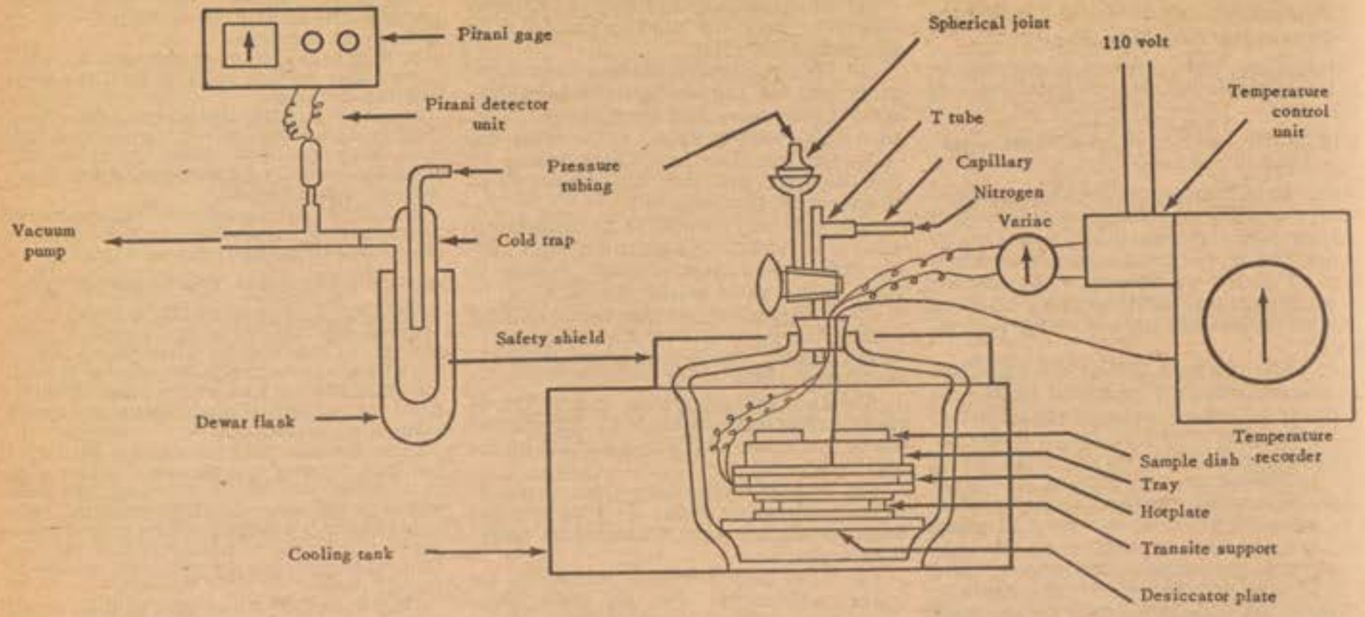
A sample is weighed into a tared aluminum weighing dish containing glass wool, the dish placed on the surface of an electric hotplate inside a vacuum desiccator whose side walls are cooled with ice water, and the solvent evaporated under vacuum. The solvent condenses on the walls of the desiccator while the glass wool in the dish reduces bumping. The residue in the dish is finally weighed.

Apparatus. 1. Solvent evaporator—This consists of a special electric hotplate mounted in a Pyrex vacuum desiccator. The latter is placed in a cooling bath and evacuated by a mechanical pump.

The component parts are listed below:

a. Desiccator and cover, Pyrex glass, large size, 250-millimeter inside diameter flange, provided with cover with opening for No. 8 rubber stopper. Insert the single arm of a 3-millimeter bore, three-way stopcock through a No. 8 rubber stopper and cut off the tubing just below the bottom of the stopper. Connect an 18/9 spherical joint to one of the two upper arms just above the stopcock barrel. Cut off the third arm about

ASSEMBLY OF DESICCATOR–HOTPLATE TOTAL SOLIDS APPARATUS



1 inch above the stopcock barrel. Attach a glass tee to this arm with the vertical outlet ground to a flat surface. Insert two electrical wires through the rubber stopper by means of glass tubing with tungsten seals and connect to the hotplate leads with porcelain wire nuts. Connect the external leads to a 110-volt line controlled with a 7.5-ampere Variac. Insert the sharpened sheath of the thermocouple assembly (iron-constantan, silver-soldered in the tip of a 12-inch piece of 14-gage hypodermic tubing) through the stopper. Bend the lower end to form a foot that will press against the hotplate. Insert the rubber stopper tightly in the opening in the desiccator cover and wire in place.

b. Porcelain desiccator plate, 230-millimeter diameter, without feet.

c. Insulating support, transite. Space the two 6-inch squares of 3⁄16-inch thick transite with four small ⅜-inch blocks of transite.

d. Hotplate, electric—For the heating surface, use an 8¼-inch circle of ⅜-inch aluminum plate. Back with a 6 x 7 inch piece of ⅜-inch aluminum plate space by about 1-inch strips of ⅛-inch aluminum at each end. Round off any extending corners to the same diameter as the top plate.

Wind a 6-foot length of 275-watt, ½-inch heating tape around the bottom 6 x 7-inch plate. Connect the two ends of the tape-leads to the power inlet.

e. Cooling bath—Use a covered sheet-metal pan with two openings in the top, one a circular hole just large enough to admit the desiccator, and the other with hinged cover for inserting the cooling medium. The depth of the bath should be equal to the height of the desiccator to the flange of the bottom section.

f. Vacuum pump.

g. Pirani gage (a McLeod gage is satisfactory).

h. Temperature recorder, 0 to 200° C., 24-hour chart—Equip with an on-and-off control across the 110-volt power supply so as to control the temperature of the hotplate at the desired setting.

i. Dry ice trap with wide-mouth Dewar flask.

j. Safety shield for desiccator.

2. Aluminum tray, 5½ x 8 x 1 inch deep—Commercial frozen-food trays of this size are satisfactory.

3. Shield, drip or spatter—Unfold the corners of an aluminum tray, puncture hole for thermocouple lead, and place loosely over the sample dishes.

4. Drying dishes, aluminum, 50-millimeter diameter, with covers.

5. Oven, drying, maintained at 110° C. ±2° C.

6. Glass wool, Pyrex.

Procedure. Assemble the apparatus as shown in the diagram.

Take sufficient glass wool to fill the weighing dish about three-fourths full when loosely packed. Roll the glass wool into a loose spiral and place in a clean, dry dish. Pass a flame from a Bunsen burner over the surface of the dish so as to melt off any stray wisps of the glass wool. Wipe off any glass fibers on the outside surface of the dish. Heat the uncovered dishes in a 110° C. oven for 30 minutes, remove, cover, cool in air, and weigh to the nearest 0.0001 gram.

Pipet about 10-milliliter aliquots of the sample solution into the dish, wetting the entire glass wool pad.

Place the uncovered dishes in an aluminum tray, maximum of eight dishes per tray. With the hotplate at room temperature and the power off, place the tray of dishes on its top surface. Place the drip or spatter shield loosely over the tray. Place the desiccator lid and guard in position. Make sure the thermocouple is pressing against the bottom of the tray. Fill the cooling bath with ice plus a small amount of water.

Add crushed dry ice to the cooling trap Dewar flask and turn the vacuum pump on. Apply heat at such a rate that the temperature reaches 130° C.–140° C. in 40 to 60 minutes, usually about 80-volt setting of the Variac. Control the temperature at 140° C. for another hour. The pressure should be 800 microns to 1,000 microns at the start, and near the end of the test should drop to 300 microns to 500 microns.

Finally close off the lead to the vacuum pump, turn off the hotplate, and fill the desiccator slowly with nitrogen (about 5 pounds per square inch) admitted through a capillary. Attach the nitrogen feedline from the capillary to the horizontal arm of the glass tee. While holding a soft-rubber stopper on the flat surface of the vertical arm, slowly open the stopcock to the desiccator. Release the stopper; the vacuum will hold it in place until atmospheric pressure is reached, when it will pop off. This prevents blowing the lid off by pressure buildup. Open the desiccator, remove the shield, and then lift out the tray with the drying dishes.

Cover the dishes, allow to cool in air, and weigh.

If the apparatus is to be used again, cool the hotplate by placing a pan of ice on its top surface.

C. Calculation:

$$\frac{\text{Grams of residue}\times\frac{20}{A}\times 100}{\text{Grams of sample}}=\text{Percent ---------- soluble,}$$

Where:

Milliliters of solution taken for total solids determination,

20 = Total volume of solvent used in dissolving the sample.

Specify the solvent used along with the percent soluble result.

(ii) *Method II—Ethyl acetate or hexane extractive.*

A sample is refluxed in the solvent for 2 hours and filtered at the boiling point. The filtrate is evaporated and the total residue weighed as a measure of the solvent extractable fraction.

Apparatus. 1. Erlenmeyer flasks, 250-milliliter, with ground joint.

2. Condensers, Allihn, 400-millimeter jacket, with ground joint.

3. Funnels, ribbed, 75-millimeter diameter, stem cut to 40 millimeters.

4. Funnels, Buchner type, with fritted disc, 60-milliliter, porosity coarse.

5. Bell jar for vacuum filtration into beaker.

Reagents. 1. Ethyl acetate, 99 percent specific gravity $\frac{20^\circ\ C.}{20^\circ\ C.}$ 0.899–0.902.

2. *n*-Hexane, commercial grade, specific gravity $\frac{20^\circ\ C.}{20^\circ\ C.}$ 0.663–0.667; boiling range 66° C.–69° C., or equivalent.

Procedure. Weigh 1 gram of sample accurately and place in a 250-milliliter Erlenmeyer flask containing two or three boiling stones. Add 100 milliliters of solvent, attach the flask to the condenser (use no grease) and reflux the mixture for two hours.[1]

Remove the flask from the heat, disconnect the condenser, and filter rapidly while still hot through a small wad of glass wool packed in a short stem funnel[2] into a tared 150-milliliter beaker. Rinse the flask and filter with two 10-milliliter portions of the hot solvent, and add the rinsings to the filtrate. Evaporate the filtrate on a steam bath with the aid of a stream of nitrogen. Dry the residue in a vacuum oven at 110° C. for two hours, cool in a desiccator and weigh to 0.0001 gram.

Determine the blank on 100 milliliters of solvent evaporated in a tared 150-milliliter beaker. Correct the sample residue for this blank if significant.

Calculation:

$$\frac{\text{Grams of residue}}{\text{Grams of sample}}\times 100 = \text{percent extractable with }\_\_\_\_\_\_\_\_\_\_$$

Specify the solvent used along with the percent extractive result.

§ 121.2502 Nylon resins.

The nylon resins listed in paragraph (a) of this section may be safely used to produce articles intended for use in processing, handling, and packaging food, subject to the provisions of this section:

(a) The nylon resins are manufactured as described in this paragraph so as to meet the specifications prescribed in paragraph (b) of this section when tested by the methods described in paragraph (c) of this section.

(1) Nylon 66 resins are manufactured by the condensation of hexamethylenediamine and adipic acid.

(2) Nylon 610 resins are manufactured by the condensation of hexamethylenediamine and sebacic acid.

(3) Nylon 66/610 resins are manufactured by the condensation of equal-weight mixtures of nylon 66 salts and nylon 610 salts.

(4) Nylon 6/66 resins are manufactured by the condensation and polymerization of mixtures of nylon 66 salts and *epsilon*-caprolactam under such conditions that the *epsilon*-caprolactam monomer content does not exceed 0.7 percent by weight of the finished nylon 6/66 resins.

(5) Nylon 11 resins are manufactured by the condensation of 11-aminoundecanoic acid.

(6) Nylon 6 resins are manufactured by the polymerization of *epsilon*-caprolactam.

(b) Specifications.

Nylon resins	Specific gravity	Melting point	Solubility in boiling 4.2*N* HCl	Maximum extractable fraction in selected solvents (expressed as percent by weight of resin)			
				Water	95 percent ethyl alcohol	Ethyl acetate	Benzene
		Degrees F.		*Percent*	*Percent*	*Percent*	*Percent*
1 Nylon 66 resins	1.14±0.015	475–495	Dissolves in 1 hr.	1.5	1.5	0.2	0.2
2 Nylon 610 resins	1.09±0.015	405–425	Insoluble after 1 hr.	1.0	2.0	1.0	1.0
3 Nylon 66/610 resins	1.10±0.015	375–395	Dissolves in 1 hr.	1.5	2.0	1.0	1.0
4 Nylon 6/66 resins	1.13±0.015	440–460	do	2.0	2.0	1.5	1.5
5.1 Nylon 11 resins for use in articles intended for one-time use or repeated use in contact with food.	1.04±0.015	355–375	Insoluble after 1 hr.	0.05	0.05	0.02	0.02
5.2 Nylon 11 resins for use only: a. In articles intended for repeated use in contact with food. b. In side-seam cements for articles intended for one-time use in contact with food and which are in compliance with § 121.2514.	1.04±0.015	355–375	do	0.10	1.00	0.15	0.15
6.1 Nylon 6 resins	1.15±0.015	392–446	Dissolves in 1 hour.	1.0	2.0	1.0	1.0
6.2 Nylon 6 resins for use only in food-contact films having an average thickness not to exceed 0.001 inch.	1.15±0.015	392–446	do	1.5	2.0	1.0	1.0

(c) *Analytical methods.* (1) *Specific gravity.* Specific gravity shall be determined by weighing a 1-gram to 5-gram sample first in air and then in freshly boiled distilled water at 23° C. ±2° C.

(2) *Melting point.* The melting point shall be determined as follows: Use a hot-stage apparatus. The use of crossed nicol prisms with a microscope hot stage and reading of the thermometer when the birefringence disappears increases the accuracy. If the crossed nicol apparatus is not available, use the lowest temperature at which the sample becomes transparent or the sharp edges or corners of the sample become rounded as the melting point. In case of doubt as to the onset of melting, the sample is prodded with a sharp instrument. If it sticks to the heating block, it is considered to have melted. If the melting point is low, dry the sample in an oven at 85° C. for 24 hours in a nitrogen atmosphere, then repeat the test.

(3) *Solubility in boiling 4.2N HCl.* The test shall be run on a sample approximately the size of a ⅛-inch cube in at least 25 milliliters of 4.2 normal hydrochloric acid.

(4) *Maximum extractable fraction in selected solvents.* The procedure for determining the maximum extractable fraction of the nylon resins in selected solvents is as follows:

(i) Film should be cut with ordinary scissors into pieces of a convenient size such as ¼-inch squares, for the extraction tests described in this section. The granules of nylon molding powders are in the proper form for the extraction tests. Samples of fabricated articles such as pipe, fittings, and other similar articles must be cut to approximately the size of the molding powder. This can be done conveniently by using a small-scale commercial plastics granulator and cutting the sample through a screen having ¼-inch mesh. Fine particles should be separated from the cut resin by screening through a 20-mesh screen. The material retained on the screen is suitable for the extraction tests.

(ii) The organic solvents must be of American Chemical Society analytical reagent grade; distilled water is used. Approximately 30 grams of the prepared sample is weighed to the nearest milligram. The weighed resin is transferred to a 500-milliliter round-bottom flask equipped with a reflux condenser. Approximately 300-milliliters of solvent is added to the flask and the contents refluxed gently for 8 hours with a heating mantle. The solvent is then filtered off immediately while still hot, using a Buchner funnel approximately 5 inches in diameter, a suction flask, and a hardened filter paper (Whatman No. 50 or equivalent). The paper is wet with the solvent and a slight suction applied just before starting the filtration. The resin is washed twice with approximately 100-milliliter portions of solvent and the combined filtrate and washings are reduced to approximately 25 milliliters by evaporation at reduced pressure (50 millimeters to 100 millimeters of mercury, absolute), heating as necessary. The contents of the flask are transferred to an evaporation dish (which has been held in a vacuum desiccator over anhydrous calcium sulfate until constant weight has been attained) and carefully evaporated to dryness. The weight of the solid residue is determined by difference after holding in a vacuum desiccator over anhydrous calcium sulfate until constant weight has been attained. The percent of solids extracted is calculated by dividing the weight of the solid residue by the weight of the sample and multiplying by 100.

§ 121.2503 Polyterpene resins.

Polyterpene resins identified in this section may be safely used as components of polypropylene film intended for use in contact with food, in accordance with the following prescribed conditions:

(a) The polyterpene resins are the hydrogenated polymers of terpene hydrocarbons obtainable from sulfate turpentine.

(b) The polyterpene resins have a drop-softening point of 118° C.–138° C. and an iodine value of less than 20.

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[1] *n*-Hexane is refluxed on a steam bath.

[2] A glass-sintered funnel under slight vacuum is used for flake or ground material. Preheat the funnel with about 25 milliliters of hot solvent.

§ 121.2504 Malathion.

Malathion may be safely used for the control of insects during the drying of grapes (raisins) in compliance with § 121.1172 by incorporation into paper trays in amounts not exceeding 200 milligrams per square foot.

§ 121.2505 Slimicides.

(a) Slimicides may be safely used in the manufacture of paper and paperboard that contact food, in accordance with the following prescribed conditions:

(1) Slimicides are used as antimicrobial agents to control slime in the manufacture of paper and paperboard.

(2) Subject to any prescribed limitations, slimicides are prepared from one or more of the slime-control substances named in paragraph (c) of this section, to which may be added optional adjuvant substances as provided for under paragraph (d) of this section.

(3) Slimicides are added to the process water used in the production of paper or paperboard, and the quantity added shall not exceed the amount necessary to accomplish the intended technical effect.

(b) To insure safe usage, the label or labeling of slimicides shall bear adequate directions for use.

(c) Slime-control substances permitted for use in the preparation of slimicides include substances subject to prior sanction or approval for such use and the following:

List of substances	Limitations
Acrolein.	
Alkenyl (C_{16}-C_{18}) dimethylethylammonium bromide.	
n-Alkyl (C_{12}-C_{18}) dimethyl benzyl ammonium chloride.	
Bis(1,4-bromoacetoxy)-2-butene.	
5,5-Bis(bromoacetoxymethyl) m-dioxane.	
2,6-Bis(dimethylaminomethyl) cyclohexanone.	
Bis(trichloromethyl) sulfone.	
4-Bromoacetoxymethyl-m-dioxolane.	
2-Bromo - 4' - hydroxyacetophenone.	
Cupric nitrate.	
n-Dialkyl(C_{12}-C_{18})benzylmethylammonium chloride.	
3,5 - Dimethyl - 1,3,5,2*H* - tetrahydrothiadiazine-2-thione.	
Dipotassium and disodium ethylenebis(dithiocarbamate).	
Disodium cyanodithioimidocarbonate.	
2-Mercaptobenzothiazole.	
Potassium 2 - mercaptobenzothiazole.	
Potassium *N*-methyldithiocarbamate.	
Potassium pentachlorophenate.	
Potassium trichlorophenate.	
Silver fluoride.	Limit of addition to process water not to exceed 0.024 pound, calculated as silver fluoride, per ton of paper produced.
Silver nitrate.	
Sodium dimethyldithiocarbamate.	
Sodium 2-mercaptobenzothiazole.	
Sodium pentachlorophenate.	
Sodium trichlorophenate.	
1,3,6,8-Tetraazotricyclo[6.2.1.$1^{3,6}$] dodecane.	

(d) Adjuvant substances permitted to be used in the preparation of slimicides include substances generally recognized as safe for use in food, substances generally recognized as safe for use in paper and paperboard, substances permitted to be used in paper and paperboard by other regulations in this chapter, and the following:

Acetone.
Butylene oxide.
N,N-Dimethylformamide.
Ethanolamine.
Ethylenediamine.
Monomethyl ethers of mono-, di-, and tripropylene glycol.

§ 121.2506 Industrial starch-modified.

Industrial starch-modified may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Industrial starch-modified is a food starch-modified or starch or any combination thereof that has been modified by treatment with one of the reactants hereinafter specified, in an amount reasonably required to achieve the desired functional effect but in no event in excess of any limitation prescribed, with or without subsequent treatment as authorized in § 121.1031.

List of reactants:	*Limitations*
Chlorine, 0.055 pound, as sodium hypochlorite, per pound of dry starch and epichlorohydrin, not to exceed 0.3 percent.	
(4-Chlorobutene-2) trimethylammonium chloride, not to exceed 5 percent.	Industrial starch modified by this treatment shall be used only as internal sizing for paper and paperboard intended for food packaging.
β-Diethylaminoethyl chloride hydrochloride, not to exceed 4 percent.	
Dimethylaminoethyl methacrylate, not to exceed 3 percent.	
Dimethylol ethylene urea, not to exceed 0.375 percent.	Industrial starch modified by this treatment shall be used only as internal sizing for paper and paperboard intended for food packaging.
2,3-Epoxypropyltrimethylammonium chloride, not to exceed 5 percent.	
Ethylene oxide, not to exceed 3 percent of reacted ethylene oxide in finished product.	

(b) The following adjuvants may be used as surface-active agents in the processing of industrial starch-modified:

Polyethylene glycol (400) dilaurate.
Polyethylene glycol (400) monolaurate.
Polyoxyethylene (4) lauryl ether.
Polyoxyethylene (20) sorbitan trioleate.
Sorbitan monolaurate.

(c) To insure safe use of the industrial starch-modified, the label of the food additive container shall bear the name of the additive "industrial starch-modified," and in the instance of an industrial starch-modified which is limited with respect to conditions of use, the label of the food additive container shall contain a statement of such limited use.

§ 121.2507 Cellophane.

Cellophane may be safely used for packaging food in accordance with the following prescribed conditions:

(a) Cellophane consists of a base sheet made from regenerated cellulose to which have been added certain optional substances of a grade of purity suitable for use in food packaging as constituents of the base sheet or as coatings applied to impart desired technological properties.

(b) Subject to any limitations prescribed in this part, the optional substances used in the base sheet and coating may include:

(1) Substances generally recognized as safe in food.

(2) Substances for which prior approval or sanctions permit their use in cellophane, under conditions specified in such sanctions and substances listed in Subpart E, § 121.2001.

(3) Substances that by any regulation promulgated under section 409 of the act may be safely used as components of cellophane.

(4) Substances named in this section and further identified as required.

(c) List of substances:

	Limitations (residue and limits of addition expressed as percent by weight of finished packaging cellophane)
Acrylonitrile-butadiene copolymer resins	As the basic polymer.
Acrylonitrile-butadiene-styrene copolymer resins	Do.
Acrylonitrile-styrene copolymer resins	Do.
Acrylonitrile-vinyl chloride copolymer resins	Do.
Alkyl ketene dimers identified in § 121.2538	
Aluminum hydroxide	
Aluminum silicate	
Ammonium persulfate	
Ammonium sulfate	
Behenamide	
Butadiene-styrene copolymer	As the basic polymer.
1,3-Butanediol	

	Limitations (residue and limits of addition expressed as percent by weight of finished packaging cellophane)—Continued
n-Butyl acetate	0.1 percent.
n-Butyl alcohol	Do.
Calcium ethyl acetoacetate	
Carboxymethyl hydroxyethylcellulose polymer	
Castor oil, hydrogenated	
Castor oil phthalate with adipic acid and fumaric acid-diethylene glycol polyester.	As the basic polymer.
Castor oil phthalate, hydrogenated	Alone or in combination with other phthalates where total phthalates do not exceed 5 percent.
Castor oil, sulfonated, sodium salt	
Cellulose acetate butyrate	
Cellulose acetate propionate	
Cetyl alcohol	
Clay, natural	
Coconut oil fatty acid (C_{10}–C_{18}) diethanolamide, coconut oil fatty acid (C_{10}–C_{18}) diethanolamine soap, and diethanolamine mixture having total alkali (calculated as potassium hydroxide) of 16–18% and having an acid number of 25-35.	For use only as an adjuvant employed during the processing of cellulose pulp used in the manufacture of cellophane base sheet.
Copal resin, heat processed	As basic resin.
Damar resin	
Dibutylphthalate	Alone or in combination with other phthalates where total phthalates do not exceed 5 percent.
Dicyclohexyl phthalate	Do.
Diethylene glycol ester of the adduct of terpene and maleic anhydride.	
Di(2-ethylhexyl) adipate	
Di(2-ethylhexyl) phthalate	Alone or in combination with other phthalates where total phthalates do not exceed 5 percent.
Dimethylcyclohexyl phthalate	Do.
Dimethyldialkyl (C_8–C_{18}) ammonium chloride	0.005 percent for use only as a flocculant for slip agents.
Di-n-octyltin bis(2-ethylhexyl maleate)	For use only as a stabilizer at a level not to exceed 0.55 percent by weight of the coating solids in vinylidene chloride copolymer waterproof coatings prepared from vinylidene chloride copolymers identified in this paragraph, provided that such vinylidene chloride copolymers contain not less than 90 percent by weight of polymer units derived from vinylidene chloride.
N,N'-Dioleoyl ethylenediamine (*N,N'*-ethylenebisoleamide).	
Disodium EDTA	
Distearic acid ester of di(hydroxyethyl)diethylenetriamine monoacetate.	0.06 percent.
N,N'-Distearylethylenediamine (*N,N'*-ethylenebisstearamide).	
Epoxidized polybutadiene	For use only as a primer subcoat to anchor surface coatings to the base sheet.
Erucamide	

	Limitations (residue and limits of addition expressed as percent by weight of finished packaging cellophane)—Continued
Ethyl acetate	
Ethylene-alkene-1 copolymers complying with § 121.2508.	
Ethylene-vinyl acetate copolymers complying with § 121.2570.	
2-Ethylhexyl alcohol	0.1 percent for use only as lubricant.
Fatty acids derived from animal and vegetable fats and oils, and the following salts of such acids, single or mixed: Aluminum, ammonium, calcium, magnesium, potassium, sodium.	
Ferrous ammonium sulfate	
Fumaric acid	
Glycerin-maleic anhydride	As the basic polymer.
Glycerol diacetate	
Glycerol monoacetate	
Hydroxyethyl cellulose, water-insoluble	
Hydroxypropyl cellulose identified in § 121.1160	
Isopropyl acetate	Residue limit 0.1 percent.
Isopropyl alcohol	Do.
Itaconic acid	
Lanolin	
Lauryl alcohol	
Lauryl sulfate salts: ammonium, magnesium, potassium, sodium.	
Maleic acid	0.1 percent.
Maleic acid adduct of butadienestyrene copolymer	
Melamine formaldehyde	As the basic polymer.
Melamine-formaldehyde modified with one or more of the following: Butyl alcohol, diaminopropane, diethylenetriamine, ethyl alcohol, guanidine, imino-bis-butylamine, imino-bis-ethylamine, imino-bis-propylamine, methyl alcohol, polyamines made by reacting ethylenediamine or trimethylenediamine with dichloroethane or dichloropropane, sulfanilic acid, tetraethylenepentamine, triethanolamine, triethylenetetramine.	As the basic polymer, and used as a resin to anchor coatings to substrate.
Methyl ethyl ketone	Residue limit 0.1 percent.
Methyl hydrogen siloxane	0.1 percent as the basic polymer.
Mineral oil, white	
Naphthalenesulfonic acid-formaldehyde condensate, sodium salt.	0.1 percent, for use only as an emulsifier.
Nitrocellulose, 10.9 percent–12.2 percent nitrogen	
Nylon resins complying with § 121.2502	
Oleic acid reacted with *N*-alkyl trimethylenediamine (alkyl C_{12} to C_{18}).	
Oleic acid, sulfonated, sodium salt	
Oleyl palmitamide	
N,N'-Oleoyl-stearylethylenediamine (*N*-(2-stearoylaminoethyl)oleamide).	
Paraffin, synthetic, complying with § 121.2575	
Pentaerythritol tetrastearate	0.1 percent.
Polyamide resins derived from dimerized vegetable oil acids (containing not more than 20 percent of monomer acids) and ethylenediamine as the basic resin.	For use only in cellophane coatings that contact food at temperatures not to exceed room temperature.
Polycarbonate resins complying with § 121.2574	

	Limitations (residue and limits of addition expressed as percent by weight of finished packaging cellophane)—Continued
Polyester resin formed by the reaction of the methyl ester of rosin, phthalic anhydride, maleic anhydride, and ethylene glycol, such that the polyester resin has an acid number of 4 to 11, a drop-softening point of 70° C.-92° C., and a color of K or paler.	
Polyethylene	
Polyethyleneaminostearamide ethyl sulfate produced when stearic acid is made to react with equal parts of diethylenetriamine and triethylenetetramine and the reaction product is quaternized with diethyl sulfate.	0.1 percent.
Polyethylene glycol (molecular weight greater than 300).	
Polyethylenimine	As the basic polymer, for use as a resin to anchor coatings to the substrate and for use as an impregnant in the food-contact surface of regenerated cellulose sheet in an amount not to exceed that required to improve heat-sealable bonding between coated and uncoated sides of cellophane.
Polyisobutylene complying with § 121.2590	
Polyoxyethylene (20) sorbitan monopalmitate	
Polyoxypropylene-polyoxyethylene block polymers (molecular weight 1,900–9,000).	For use as an adjuvant employed during the processing of cellulose pulp used in the manufacture of cellophane base sheet.
Polypropylene complying with § 121.2501	
Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate) conforming to the identity prescribed in § 121.1030.	
Polystyrene	As the basic polymer.
Polyvinyl acetate	Do.
Polyvinyl alcohol (minimum viscosity of 4 percent aqueous solution at 20° C. of 4 centipoises).	
Polyvinyl chloride	As the basic polymer.
Polyvinyl stearate	Do.
n-Proply acetate	Residue limit 0.1 percent.
n-Propyl alcohol	Do.
Rapeseed oil, blown	
Rosins and rosin derivatives as provided in § 121.2592	
Rubber, natural (natural latex solids)	
Silica	
Silicic acid	
Sodium m-bisulfite	
Sodium dioctyl sulfosuccinate	
Sodium dodecylbenzenesulfonate	
Sodium oleyl sulfate-sodium cetyl sulfate mixture	For use only as an emulsifier for coatings; limit 0.005 percent where coating is applied to one side only and 0.01 percent where coating is applied to both sides.
Sodium silicate	
Sodium sulfate	
Sodium sulfite	
Sorbitan monolaurate	
Sorbitan monooleate	
Sorbitan monopalmitate	
Sorbitan monstearate conforming to the identity prescribed in § 121.1029.	
Sorbitan trioleate	
Sorbitan tristearate	
Spermaceti wax	
Stearyl alcohol	
Styrene-maleic anyhdride resins	As the basic polymer.
Terpene resins identified in § 121.1059	
Tetrahydrofuran	Residue limit of 0.1 percent.
Titanium dioxide	
Toluene	Residue limit of 0.1 percent.
Toluene sulfonamide formaldehyde	0.6 percent as the basic polymer.
Triethylene glycol	
Triethylene glycol diacetate, prepared from triethylene glycol containing not more than 0.1 percent of diethylene glycol.	
Urea (carbamide)	
Urea formaldehyde	As the basic polymer.
Urea formaldehyde modified with methanol, ethanol, butanol diethylenetriamine, triethylenetetramine, tetraethylenepentamine, guanidine, sodium sulfite, sulfanilic acid, imino-bis-ethylamine, imino-bis-propylamine, imino-bis-butylamine, diaminopropane, diaminobutane, aminomethylsulfonic acid, polyamines made by reacting ethylenediamine or trimethylenediamine with dichloroethane or dichloropropane.	As the basic polymer, and used as a resin to anchor coatings to the subtrate.
Vinyl acetate-vinyl chloride copolymer resins	As the basic polymer.
Vinyl acetate-vinyl chloride-maleic acid copolymer resins.	Do.
Vinylidene chloride copolymerized with one or more of the following: Acrylic acid, acrylonitrile, butyl acrylate, butyl methacrylate, ethyl acrylate, 2-ethylhexyl acrylate, 2-ethylhexyl methacrylate, ethyl methacrylate, itaconic acid, methacrylic acid, methyl acrylate, methyl methacrylate, propyl acrylate, propyl methacrylate, vinyl chloride.	Do.
Vinylidene chloride-methacrylate decyloctyl copolymer.	Do.
Wax, petroleum, complying with § 121.2586	

(d) Any optional component listed in this section covered by a specific food additive regulation must meet any specifications in that regulation. Any component not itself covered by a regulation shall meet specifications, if any, set forth in an order that has been issued extending the effective date of the statute for that article.

§ 121.2508 Ethylene-alkene-1 copolymers.

Ethylene-alkene-1 copolymers may be safely used to produce packaging materials, containers, and equipment intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) Ethylene-alkene-1 copolymers consist of basic resins produced by the catalytic copolymerization of ethylene and one or more of the 1-alkenes having three to eight carbon atoms, to which may have been added certain optional substances to impart desired technological properties to the resin. Subject to any limitations prescribed in this section, the optional substances may include:

(1) Substances generally recognized as safe in food and food packaging.

(2) Substances the use of which is permitted under applicable regulations in this part, prior sanctions, or approvals.

(b) Ethylene-alkene-1 copolymers shall conform to the specifications prescribed in subparagraph (1) of this paragraph and shall meet the extractability limits prescribed in subparagraph (2) of this paragraph, when tested by the methods prescribed in § 121.2510.

(1) *Specifications*—(i) *Infrared identification*. Ethylene-alkene-1 copolymers can be identified by their characteristic infrared spectra.

(ii) *Specific gravity*. Ethylene-alkene-1 copolymers have a specific gravity of not less than 0.85 nor more than 1.00 as determined by A.S.T.M. Method D-1505.

(2) *Limitations*. (i) Ethylene-alkene-1 copolymers may be used in contact with food except as a component of articles used for packaging or holding food during cooking, provided they meet the following extractability limits:

(*a*) Maximum soluble fraction of 30 percent in xylene after refluxing and subsequent cooling to 25° C.

(*b*) Maximum extractable fraction of 3.1 percent when extracted with ethyl acetate at 50° C.

(*c*) Maximum extractable fraction of 5.5 percent when extracted with *n*-hexane at 50° C.

(ii) Ethylene-alkene-1 copolymers having chemical and physical properties to attain the desired technical effect may be used as a component of an adhesive.

(iii) Ethylene-alkene-1 copolymers may be used in contact with food to include use as a component of articles for packaging or holding food during cooking, provided they meet the following extractability limits:

(*a*) Maximum soluble fraction of 30 percent in xylene after refluxing and subsequent cooling to 25° C.

(*b*) Maximum extractable fraction of 3.1 percent when extracted with ethyl acetate at 50° C.

(*c*) Maximum extractable fraction of 2.6 percent when extracted with *n*-hexane at 50° C.

(c) Ethylene-alkene-1 copolymers, alone or in combination with polyethylene complying with § 121.2510, may be subjected to irradiation by electron bombardment from a source not to exceed 2.3 million volts intensity to impart desired properties: *Provided*, That the finished resin complies with the limitations prescribed by § 121.2510(d).

§ 121.2509 Release agents.

Substances listed in paragraph (b) of this section may be safely used as release agents in petroleum wax complying with § 121.2586 and in polymeric resins that contact food, subject to the provisions of this section.

(a) The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect or any limitations prescribed in this section.

(b) Release agents:

List of substances:	*Limitations*
Erucamide (erucylamide).	----------
Oleyl palmitamide.	----------
Saturated fatty acid amides manufactured from fatty acids derived from animal, marine, or vegetable fats and oils.	----------
Stearyl erucamide	----------

§ 121.2510 Polyethylene.

Polyethylene may be safely used to produce packaging materials, containers, and equipment intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) Polyethylene consists of a basic resin produced by the catalytic polymerization of ethylene to which may have been added certain optional substances of a grade of purity suitable for use in contact with food to impart desired technological properties. Subject to any limitation prescribed in this section, the optional substances may include:

(1) Substances generally recognized as safe in food and food packaging.

(2) Substances the use of which is permitted under regulations in this part, prior sanctions, or approvals.

(b) Polyethylene shall conform to the specifications prescribed in paragraph (c) of this section, and shall meet the extractability limits prescribed in paragraph (d) of this section when tested by the methods provided in paragraph (e) of this section.

(c) Specifications: (1) *Infrared identification*. Polyethylene can be identified by its characteristic infrared spectrum.

(2) *Specific gravity*. Polyethylene has a specific gravity of not less than 0.85 nor more than 1.00, as determined by ASTM Method D-1505.

(d) Extractability limitations: (1) Polyethylene may be used in contact with food, except for articles used for packing or holding food during cooking, provided it meets the following extractability limits:

(i) Maximum soluble fraction of 11.3 percent in xylene after refluxing and subsequent cooling to 25° C.

(ii) Maximum extractable fraction of 3.1 percent when extracted with ethyl acetate at 50° C.

(iii) Maximum extractable fraction of 5.5 percent when extracted with *n*-hexane at 50° C.

(2) Polyethylene having chemical and physical properties to attain the desired technical effect may be used as a component of adhesives.

(3) Polyethylene may be used as a component of articles for packing or holding food during cooking, provided it meets the following extractability limitations:

(i) Maximum soluble fraction of 11.3 percent in xylene after refluxing and subsequent cooling to 25° C.

(ii) Maximum extractable fraction of 3.1 percent when extracted with ethyl acetate at 50° C.

(iii) Maximum extractable fraction of 2.6 percent when extracted with *n*-hexane at 50° C.

(4) Polyethylene complying with the extractability limitations of subparagraph (1) of this paragraph may be used as a component of food-contact coatings. In addition, polyethylene that complies with the following extractability limitations may be used at levels up to and including 50 percent by weight of any mixture employed as a food-contact coating:

(i) Maximum soluble fraction of 75 percent in xylene after refluxing and subsequent cooling to 25° C.

(ii) Maximum extractable fraction of 8 percent when extracted with ethyl acetate at 50° C.

(iii) Maximum extractable fraction of 53 percent when extracted with *n*-hexane at 50° C.

(e) *Extractability methods:* (1) *Hexane extractables in polyethylene (applicable to polyethylene in film form not exceeding 5 mils thickness)*—(i) *Special apparatus*—(*a*) *Extraction apparatus*. Two-liter, straight-walled, Pyrex glass resin kettles, fitted with three-hole ground covers, are most convenient for this purpose. The cover is fitted with a thermometer, a gas-tight stirrer driven by an air motor or explosion-proof electric motor, and a reflux condenser. The kettle is fitted with an electric heating mantle of appropriate size and shape which is controlled by a variable-voltage transformer.

(*b*) *Evaporating apparatus*. Rapid evaporation of large volumes of solvent requires special precautions to prevent contamination by dust. This is facilitated by a special "gas" cover which consists of an inverted, flat Pyrex crystallizing dish of an appropriate size (190 millimeters by 100 millimeters) to fit a 1-liter beaker. Through the center of the dish are sealed an inlet tube for preheated, oxygen-free nitrogen, and an outlet tube located 1 inch off center. Nitrogen is fed from the supply source through a coil of ¼-inch stainless steel tubing immersed in the same steam bath used to supply heat for solvent evaporation. All connections are made with flexible tetrafluoroethylene tubing.

(ii) *Reagents*—(*a*) *n-Hexane*. Spectro-grade *n*-hexane.

(*b*) *Nitrogen*. High purity, dry nitrogen containing less than 10 parts per million of oxygen.

(iii) *Procedure*. (*a*) The film sample is cut into approximately 1-inch squares by any convenient method that avoids contamination by dust, dirt, or grease (do not touch with bare fingers). Transfer 2.5 grams (accurately weighed to nearest 0.001 gram) of the cut film to the resin kettle with the aid of forceps. Add 1 liter of solvent and clamp top in position. Start water flowing through jacket of the reflux condenser and apply air pressure to the stirring motor to produce vigorous agitation. Turn on heating jacket with transformer set at a predetermined voltage to bring the temperature of the contents to 50.0° C.

within 20–25 minutes for hexane. As the thermometer reading approaches 45° C.–47° C. for hexane, reduce the voltage to the predetermined setting which will just maintain the temperature at 50° C. Do not overshoot the prescribed temperature. Should this occur, discard the test and start afresh.

(*b*) Exactly 2 hours after the hexane temperature has reached 50° C. disconnect the heater and remove the resin kettle from the heating jacket. When extracting with hexane, decant the solvent, while still at 50° C., through a coarse filter paper placed on top of a fritted glass funnel, collecting the filtrate in a tared, glass-stoppered Erlenmeyer flask of 1-liter capacity.

(*c*) Determine to the nearest gram the weight of the filtrate recovered. Recovery should be at least 90 percent of the original solvent. Losses due to evaporation during heating and filtering have been found not to exceed 10 percent.

(*d*) Transfer about half of the solvent filtrate to a 1-liter beaker placed on an opening in the steam bath and immediately cover with the special "gas" cover the inlet tube of which has been attached with flexible tetrafluoroethylene tubing to a source of high purity nitrogen in series with a stainless steel heating coil immersed directly in the body of the steam bath. Maintain a positive flow of warm nitrogen gas throughout the evaporation of the solvent, adding the remainder of the filtrate from the Erlenmeyer flask as the evaporation proceeds. When the volume of the solvent has been reduced to about 50 milliliters, transfer the concentrated liquid to a previously tared weighing dish of suitable size. Wash the beaker twice with 20–30-milliliter portions of warm solvent, adding the washings to the weighing dish while continuing to evaporate the remainder of the solvent under the gas cover with its flow of warm nitrogen directed toward the center of the dish.

(*e*) In the event that an insoluble residue that cannot be removed with warm solvent remains in the beaker, it may be necessary to heat with a small amount of a higher boiling solvent such as benzene or toluene, transferring these washings to the weighing dish before final evaporation to dryness.

(*f*) Transfer the weighing dish with its residue to a vacuum desiccator, and allow it to remain overnight (at least 12 hours), after which the net weight of the dry residue is determined to the nearest 0.0001 gram. Correct the result for any solvent blank equivalent to the nonvolatile matter determined to be contained in the amount of solvents used in the test.

(iv) *Note.* The procedure described in this subparagraph is suitable for the extraction of polymer powders (80-mesh or finer) that have been prepared by grinding molding pellets or molded or extruded articles through a laboratory mill under conditions that prevent excessive heating of the samples (below 35° C.)

(2) *Limit test for ethyl acetate extractables (applicable to polymer in film form not exceeding 5 mils thickness)*—(i) *Special apparatus*—(*a*) *Extraction apparatus.* Two-liter, straight-walled, Pyrex glass resin kettles, fitted with three-hole ground covers, are most convenient for this purpose. The cover is fitted with a thermometer, a gas-tight stirrer driven by an air motor or explosion-proof electric motor, and a reflux condenser. The kettle is fitted with an electric heating mantle of appropriate size and shape which is controlled by a variable-voltage transformer.

(*b*) *Evaporating apparatus.* Rapid evaporation of large volumes of solvent requires special precautions to prevent contamination by dust. This is facilitated by a special "gas" cover which consists of an inverted flat Pyrex crystallizing dish of an appropriate size (190 millimeters x 100 millimeters) to fit a 1-liter beaker. Through the center of the dish are sealed an inlet tube for preheated, oxygen-free nitrogen and an outlet tube located about 1 inch off center. Nitrogen is fed from the supply source through a coil of ¼-inch stainless steel tubing immersed in the same steam bath used to supply heat for solvent evaporation. All connections are made with flexible tetrafluoroethylene tubing.

(ii) *Reagents*—(*a*) *Ethyl acetate.* American Chemical Society reagent grade.

(*b*) *Nitrogen.* High purity, dry nitrogen containing less than 10 parts per million of oxygen.

(iii) *Procedure.* (*a*) The film sample is cut into approximately 1-inch squares by any convenient method that avoids contamination by dust, dirt, or grease (do not touch with bare fingers). Transfer 3.5 grams (accurately weighed to nearest 0.001 gram) of the cut film to the resin kettle with the aid of forceps. Add 1 liter of ethyl acetate and clamp top in position. Start water flowing through jacket of the reflux condenser and apply air pressure to the stirring motor to produce vigorous agitation. Turn on heating jacket with transformer set at a predetermined voltage to bring the temperature of the contents to 50.0° C. within 20–25 minutes. As the thermometer reading approaches 45° C.–47° C., reduce the voltage to the predetermined setting which will just maintain the temperature at 50° C. Do not overshoot the prescribed temperature. Should this occur, discard the test and start afresh.

(*b*) Exactly 2 hours after the solvent temperature has reached 50° C., disconnect the heater, remove the resin kettle from the heating jacket, and decant the ethyl acetate while still warm through a coarse filter paper placed on top of a fritted glass funnel, collecting the filtrate in a tared, glass-stoppered Erlenmeyer flask of 1-liter capacity. Determine the weight of the filtrate recovered to the nearest gram. Recovery should be at least 90 percent of the original ethyl acetate. Losses due to evaporation during heating and filtering have been found not to exceed 10 percent.

(*c*) Transfer about half of the filtrate to a 1-liter beaker placed on an opening in the steam bath and immediately cover with the special "gas" cover, the inlet tube of which has been attached with flexible tetrafluoroethylene tubing to a source of high-purity nitrogen in series with a stainless steel heating coil immersed directly in the body of the steam bath. Maintain a positive flow of warm nitrogen gas throughout the evaporation of the solvent, adding the remainder of the filtrate from the Erlenmeyer flask as the evaporation proceeds. When the volume of ethyl acetate has been reduced to about 50 milliliters, transfer the concentrated liquid to a previously tared weighing dish of suitable size. Wash the beaker twice with 20–30-milliliter portions of warm ethyl acetate, adding the washings to the weighing dish, while continuing to evaporate the remainder of the solvent under the gas cover with its flow of warm nitrogen directed toward the center of the dish.

(*d*) In the event that an insoluble residue remains in the beaker that cannot be removed with warm ethyl acetate, it may be necessary to heat with a small amount of a higher boiling solvent such as heptane, benzene, or toluene, transferring these washings to the weighing dish before final evaporation to dryness.

(*e*) Transfer the weighing dish with its residue to a vacuum desiccator and allow it to remain overnight (at least 12 hours), after which the net weight of the dry residue is determined to the nearest 0.0001 gram. Correct the result for any solvent blank equivalent to the nonvolatile matter determined to be contained in the amount of solvents used in the test.

(iv) *Note.* The procedure described in this subparagraph is also suitable for the extraction of polymer powders (80-mesh or finer) that have been prepared by grinding molding pellets or molded or extruded articles through a laboratory mill under conditions that prevent excessive heating of the sample (below 35° C.).

(3) *Xylene solubility (applicable to all types of polymers, including films and molded articles)*—(i) *Special apparatus*—(*a*) *Extraction apparatus.* Two-liter, straight-walled Pyrex glass resin kettles, fitted with ground covers, are most convenient for this purpose. The cover is equipped with a thermometer and an efficient reflux condenser. The kettle is fitted with an electric heating mantle of appropriate size and shape which is controlled by a variable-voltage transformer.

(*b*) *Constant temperature water bath.* Must be large enough to permit immersion of the extraction kettle and set to maintain 25±0.1° C.

(*c*) *Evaporating apparatus.* Gas cover consisting of a flat Pyrex crystallizing dish (190 millimeters x 100 millimeters) inverted to fit over a 1-liter beaker with 8-millimeter gas inlet tube sealed through center and an outlet tube 1 inch off center. The beaker with gas cover is inserted in an electric heating mantle equipped with a variable-voltage transformer. The outlet tube is attached to an efficient condenser mounted on a receiving flask for solvent recovery and having an outlet for connection to an aspirator pump. The heating mantle (with the beaker) is mounted on a magnetic stirring device. An infrared heat lamp is mounted, vertically 3–4 inches above the gas cover to prevent condensation of the solvent inside the cover. Make all connections with flexible tetrafluoroethylene tubing.

(ii) *Reagents*—(*a*) *Xylene*. American Chemical Society reagent grade which has been redistilled through a fractionating column to reduce the nonvolatile residue.

(*b*) *Nitrogen*. High purity, dry nitrogen containing less than 10 parts per million oxygen.

(iii) *Procedure*. (*a*) Cut the polyethylene sample into convenient small pieces, avoiding contact with bare fingers or other sources of contamination by grease, dirt, or dust. With the aid of forceps, transfer 5,000 grams ±0.001 gram of sample to the resin kettle, add 1,000 milliliters (840 grams) of xylene and clamp top in position after inserting a piece of glass rod to prevent bumping during reflux. Start water flowing through the jacket of the reflux condenser and apply full voltage (115 volts) to the heating mantle. When the xylene starts to boil, reduce the voltage to a level just sufficient to maintain reflux. After refluxing for at least 2 hours, disconnect the power source to the mantle, remove the kettle, and allow to cool in air until the temperature of the contents drops to 50° C., after which the kettle may be rapidly cooled to 25° C.–30° C. by immersion in a cold water bath. Transfer the kettle to a constant temperature bath set to maintain 25° C. ±0.1° C., and allow to equilibrate for at least 1 hour (may be left overnight if convenient).

(*b*) Break up any precipitated polyethylene that may have formed, and decant the xylene solution successively through a fast filter paper and then through a fritted glass filter into a tared, 1-liter Erlenmeyer flask, collecting only the first 450 milliliters–500 milliliters of filtrate (any attempt to collect more of the xylene solution usually results in clogging the filter and risking losses). Reweigh the Erlenmeyer flask and calculate the weight of the filtrate obtained to 0.1 gram.

(*c*) Transfer the filtrate, quantitatively, from the Erlenmeyer flask to the 1-liter beaker, insert the beaker in its heating mantle, add a glass-coated magnetic stirring bar and mount the gas cover in place, connecting the inlet tube to the nitrogen source and the outlet to the condenser of the receiving flask. Start a flow of nitrogen (2 to 3 liters per minute) into the gas cover and connect an aspirator to the receiver, using a free-flow rate equivalent to 6–7 liters of air per minute. With the infrared lamp on, adjust the voltage to the heating mantle to give a distillation rate of 12–13 milliliters per minute when the magnetic stirrer is revolving just fast enough to promote good boiling.

(*d*) When the volume of solvent in the beaker has been reduced to 30–50 milliliters, transfer the concentrated extractive to a suitable weighing dish that has been previously tared (dry). Rinse the beaker twice with 10–20-milliliter portions of fresh xylene, adding the rinsings to the weighing dish. Evaporate the remainder of the xylene on an electric hot plate set at low heat under the gas cover with a stream of nitrogen directed toward the center of the dish. Avoid any charring of the residue. Transfer the weighing dish to a vacuum desiccator at room temperature and allow to remain under reduced pressure for at least 12 hours (overnight), after which determine the net weight of the residue to the nearest 0.0001 gram. Correct the result for nonvolatile solvent blank obtained by evaporating the equivalent amount of xylene under identical conditions. Calculate the weight of residue originally present in the total weight of solvent (840 grams), using the appropriate factor based on the weight of filtrate evaporated.

(*f*) Polyethylene, alone or in combination with ethylene-alkene-1 copolymers complying with § 121.2508, may be subjected to irradiation by electron bombardment from a source not to exceed 2.3 million volts intensity to impart desired properties: *Provided*, That the finished resin complies with the limitations prescribed by paragraph (d) of this section.

§ 121.2511 Plasticizers in polymeric substances.

Subject to the provisions of this regulation, the substances listed in paragraph (b) of this section may be safely used as plasticizers in polymeric substances used in the manufacture of articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food.

(a) The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect.

(b) List of substances:

	Limitations
Butyl benzyl phthalate.	For use only: 1. As provided in §§ 121.2520 and 121.2571. 2. In polymeric substances used in food-contact articles complying with §§ 121.2514, 121.2526, or 121.2569: *Provided*, That the butyl benzyl phthlate contains not more than 1 percent by weight of dibenzyl phthalate. 3. In polymeric substances used in other permitted food-contact articles: *Provided*, That the butyl benzyl phthalate contains not more than 1 percent by weight of dibenzyl phthalate; and *Provided further*, That the finished food-contact article, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2514(d), shall yield net chloroform-soluble extractives not to exceed 0.5 mg. per square inch, as determined by the methods prescribed in § 121.2514(e).
Dicyclohexyl phthalate.	For use only: 1. As provided in §§ 121.2507, 121.2520, 121.2526, and 121.2571. 2. Alone or in combination with other phthalates, in polyvinyl chloride and polyvinyl acetate film and sheet that contact food at temperatures not to exceed room temperature provided that total phthalates, calculated as phthalic acid, do not exceed 10 percent by weight of the finished film or sheet.
Di(2-ethylhexyl) adipate.	
Di-n-hexyl azelate	Not to exceed 15 percent by weight of finished article.
Dihexyl phthalate	For use only: 1. As provided in § 121.2520. 2. In articles that contact food only of the types identified in § 121.2526 (c), table 1, under categories I, II, IV-B, VI-B, and VIII.
Diphenyl phthalate	For use only: 1. As provided in § 121.2520. 2. Alone or in combination with other phthalates, in polyvinyl chloride and polyvinyl acetate film and sheet that contact food at temperatures not to exceed room temperature, provided that total phthalates, calculated as phthalic acid, do not exceed 10 percent by weight of the finished film or sheet.
Epoxidized butyl esters of linseed oil fatty acids.	Iodine number, maximum 5; oxirane oxygen, minimum 7.8 percent.
Epoxidized linseed oil.	Iodine number, maximum 5; oxirane oxygen, minimum 9 percent.
Mineral oil, white	
Polyisobutylene (mol. wt. 300-5,000).	For use in polyethylene complying with § 121.2510, provided that the polyisobutylene is added in an amount not exceeding 0.5 percent by weight of the polyethylene, and further provided that such plasticized polyethylene shall not be used as a component of articles intended for packing or holding food during cooking.
Polyisobutylene complying with § 121.2590.	
Polypropylene, noncrystalline (density 0.80-0.88 as determined by A.S.T.M. method D-1505).	For use in polyethylene complying with § 121.2510.
Triethylene glycol	Diethylene glycol content not to exceed 0.1 percent.

(c) The use of the plasticizers in any polymeric substance or article subject to any regulation in this Subpart F must comply with any specifications and limitations prescribed by such regulation for the finished form of the substance or article.

§ 121.2512 Acrylamide-acrylic acid resins.

Acrylamide-acrylic acid resins may be safely used as components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Acrylamide-acrylic acid resins are produced by the polymerization of acrylamide with partial hydrolysis or by the copolymerization of acrylamide and acrylic acid.

(b) The acrylamide-acrylic acid resins contain less than 0.2 percent residual monomer.

(c) The resins are used as adjuvants in the manufacture of paper and paperboard in amounts not to exceed that necessary to accomplish the technical effect and not to exceed 2 percent by weight of the paper or paperboard.

§ 121.2513 Polysorbate 80 as an antifogging agent in food packaging.

Polysorbate 80 may be safely used in food-packaging films in accordance with the following prescribed conditions:

(a) The polysorbate 80 meets the specifications prescribed in § 121.1009.

(b) It is used or intended for use as an antifogging agent as follows:

(1) As a component of polyvinyl chloride film used for packaging meat and fresh fruits and vegetables whereby the maximum amount does not exceed 1.2 percent of the weight of the film.

(2) As a component of rubber hydrochloride film used for packaging meat whereby the maximum amount does not exceed 1.5 percent of the weight of the film.

§ 121.2514 Resinous and polymeric coatings.

Resinous and polymeric coatings may be safely used as the food-contact surface of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) The coating is applied as a continuous film or enamel over a metal substrate, or the coating is intended for repeated food-contact use and is applied to any suitable substrate as a continuous film or enamel that serves as a functional barrier between the food and the substrate. The coating is characterized by one or more of the following descriptions:

(1) Coatings cured by oxidation.

(2) Coatings cured by polymerization, condensation, and/or cross-linking without oxidation.

(3) Coatings prepared from prepolymerized substances.

(b) The coatings are formulated from optional substances that may include:

(1) Substances generally recognized as safe in food.

(2) Substances the use of which is permitted by regulations in this part or which are permitted by prior sanction or approval and employed under the specific conditions, if any, of the prior sanction or approval.

(3) Any substance employed in the production of resinous and polymeric coatings that is the subject of a regulation in this subpart F conforms with any specification in such regulation, and any substance that is not the subject of a regulation in this subpart F conforms with the specification, if any, provided in an order extending the effective date of the statute for such substance as an indirect additive to food. Substances named in this subparagraph and further identified as required:

(i) Drying oils, including the triglycerides or fatty acids derived therefrom.

Beechnut.
Candlenut.
Castor (including dehydrated).
Chinawood (tung).
Coconut.
Corn.
Cottonseed.
Fish (refined).
Hempseed.
Linseed.
Oiticia.
Perilla.
Poppyseed.
Pumpkinseed.
Safflower.
Sesame.
Soybean.
Sunflower.
Tall oil.
Walnut.

The oils may be raw, heat-bodied, or blown. They may be refined by filtration, degumming, acid or alkali washing, bleaching, distillation, partial dehydration, partial polymerization, or solvent extraction, or modified by combination with maleic anhydride.

(ii) Reconstituted oils from triglycerides or fatty acids derived from the oils listed in subdivision (i) of this subparagraph to form esters with:

Butylene glycol.
Ethylene glycol.
Pentaerythritol.
Polyethylene glycol.
Polypropylene glycol.
Propylene glycol.
Sorbitol.
Trimethylol ethane.
Trimethylol propane.

(iii) Synthetic drying oils, as the basic polymer:

Butadiene and methylstyrene copolymer.
Butadiene and styrene copolymer, blown or unblown.
Maleic anhydride adduct of butadiene styrene.
Polybutadiene.

(iv) Natural fossil resins, as the basic resin:

Copal.
Damar.
Elemi.
Gilsonite.
Glycerol ester of damar, copal, elemi, and sandarac.
Sandarac.
Shellac.
Utah coal resin.

(v) Rosins and rosin derivatives, with or without modification by polymerization, isomerization, incidental decarboxylation, and/or hydrogenation, as follows:

(*a*) Rosins, refined to color grade of K or paler:

Gum rosin.
Tall oil rosin.
Wood rosin.

(*b*) Rosin esters formed by reacting rosin ((v)(*a*) of this subparagraph) with:

4,4'-*sec*-Butylidenediphenol-epichlorohydrin (epoxy).
Diethylene glycol.
Ethylene glycol.
Glycerol.
4,4'-Isopropylidenediphenol-epichlorohydrin (epoxy).
Methyl alcohol.
Pentaerythritol.

(*c*) Rosin esters ((v)(*b*) of this subparagraph) modified by reaction with:

Maleic anhydride.
o-, *m*-, and *p*-substituted phenol-formaldehydes listed in subdivision (vi) of this subparagraph.
Phenol-formaldehyde.

(*d*) Rosin salts:

Calcium resinate (limed rosin).
Zinc resinate.

(vi) Phenolic resins as the basic polymer formed by reaction of phenols with formaldehyde:

(*a*) Phenolic resins formed by reaction of formaldehyde with:

Alkylated (methyl, ethyl, propyl, isopropyl, butyl) phenols.
p-*tert*-Amylphenol.
4,4'-*sec*-Butylidenediphenol.
p-*tert*-Butylphenol.
o-, *m*-, and *p*-Cresol.
p-Cyclohexylphenol.
4,4'-Isopropylidenediphenol.
p-Nonylphenol.
p-Octylphenol.
3-Pentadecyl phenol mixture obtained from cashew nut shell liquid.
Phenol.
Phenyl *o*-cresol.
p-Phenylphenol.
Xylenol.

(*b*) Adjunct for phenolic resins: Aluminum butylate.

(vii) Polyester resins (including alkyd-type), as the basic polymers, formed as esters of acids listed in (*a*) and (*b*) of this subdivision by reaction with alcohols in (*c*) and (*d*) of this subdivision.

(*a*) Polybasic acids:

Adipic.
Dimerized fatty acids derived from oils listed in subdivision (i) of this subparagraph.
Diphenolic acid.
Fumaric.
Isophthalic.
Maleic.
Orthophthalic.
Sebacic.
Terephthalic.
Terpene-maleic acid adduct.
Trimellitic.

(*b*) Monobasic acids:

Benzoic acid.
tert-Butyl benzoic acid.
Fatty acids derived from oils listed in subdivision (i) of this subparagraph.
Rosins listed in subdivision (v)(*a*) of this subparagraph, for use only as reactants in oil-based or fatty acid-based alkyd resins.

(*c*) Polyhydric alcohols:

Butylene glycol.
Diethylene glycol.
Ethylene glycol.
Glycerol.
Mannitol.
a-Methyl glucoside.
Pentaerythritol.
Propylene glycol.
Sorbitol.
Trimethylol ethane.
Trimethylol propane.

(*d*) Monohydric alcohols:

Cetyl alcohol.
Decyl alcohol.
Lauryl alcohol.
Myristyl alcohol.
Octyl alcohol.
Stearyl alcohol.

(viii) Epoxy resins, catalysts, and adjuncts:

(*a*) Epoxy resins, as the basic polymer:

4,4'-*sec*-Butylidenediphenol-epichlorohydrin.
4,4'-*sec*-Butylidenediphenol-epichlorohydrin reacted with one or more of the drying oils or fatty acids listed in subdivision (i) of this subparagraph.

- 4,4'-*sec*-Butylidenediphenol-epichlorohydrin chemically treated with one or more of the following substances:
  - Allyl ether of mono-, di-, or trimethylol phenol.
  - 4,4'-*sec*-Butylidenediphenol-formaldehyde.
  - 4,4'-Isopropylidenediphenol-formaldehyde.
  - Melamine-formaldehyde.
  - Phenol-formaldehyde.
  - Urea-formaldehyde.
- Epoxidized polybutadiene.
- Glycidyl ethers formed by reacting phenol-novolak resins with epichlorohydrin.
- 4,4'-Isopropylidenediphenol-epichlorohydrin.
- 4,4'-Isopropylidenediphenol-epichlorohydrin reacted with one or more of the drying oils or fatty acids listed in subdivision (i) of this subparagraph.
- 4,4'-Isopropylidenediphenol-epichlorohydrin chemically treated with one or more of the following substances:
  - Allyl ether of mono-, di-, or trimethylol phenol.
  - 4,4'-*sec*-Butylidenediphenol-formaldehyde.
  - 4,4'-Isopropylidenediphenol-formaldehyde.
  - Melamine-formaldehyde.
  - Phenol-formaldehyde.
  - Urea-formaldehyde.

(*b*) Catalysts and cross-linking agents for epoxy resins:

- Cyanoguanidine.
- Diphenylamine.
- Diethylenetriamine.
- Ethylenediamine.
- Isophthalyl dihydrazide for use only in coatings subject to the provisions of paragraph (c) (3) or (4) of this section.
- *N*-Oleyl-1,3-propanediamine with not more than 10 percent by weight of diethylaminoethanol.
- Polyamine produced when 1 mole of the chlorohydrin diether of polyethylene glycol 400 is made to react under dehydrohalogenating conditions with 2 moles of *N*-octadecyltrimethylenediamine, for use only in coatings that are subject to the provisions of paragraph (c) (3) or (4) of this section and that contact food at temperatures not to exceed room temperature.
- Tetraethylenepentamine.
- Tetraethylenepentamine reacted with equimolar quantities of fatty acids.
- Tri(dimethylaminomethyl) phenol and its salts prepared from the fatty acid moieties of the salts listed in subdivision (xxii) (*b*) of this subparagraph (3), for use only in coatings subject to the provisions of paragraph (c) (3) or (4) of this section.
- Triethylenetetramine.

(*c*) Adjuncts for epoxy resins:

- Aluminum butylate.
- Polyamides from dimerized vegetable oils and the amine catalysts listed in (*b*) of this subdivision, as the basic polymer.

(ix) Coumarone-indene resin, as the basic polymer.

(x) Petroleum hydrocarbon resin (cyclopentadiene type), as the basic polymer.

(xi) Terpene resins, as the basic polymer, from one or more of the following:

- Dipentene.
- α-Pinene.
- β-Pinene.

(xii) Urea-formaldehyde, as the basic polymer:

- Urea-formaldehyde.
- Urea-formaldehyde chemically modified with methyl, ethyl, butyl, propyl, isopropyl, or isobutyl alcohol.
- Urea-formaldehyde chemically modified with one or more of the amine catalysts listed in subdivision (viii) (*b*) of this subparagraph.

(xiii) Triazine-formaldehyde resins, as the basic polymer:

- Benzoguanamine-formaldehyde.
- Melamine-formaldehyde.
- Melamine-formaldehyde chemically modified with one or more of the following amine catalysts:
  - Amine catalysts listed in subdivision (viii) (*b*) of this subparagraph.
  - Dimethylamine-2-methyl-1-propanol.
  - Methylpropanolamine.
  - Triethanolamine.
- Melamine-formaldehyde chemically modified with methyl, ethyl, propyl, isopropyl, butyl, or isobutyl alcohol.

(xiv) Modifiers (for oils and alkyds, including polyesters), as the basic polymer:

- Butyl methacrylate.
- Cyclopentadiene.
- Methyl, ethyl, butyl, or octyl esters of acrylic acid.
- Methyl methacrylate.
- Styrene.
- Vinyl toluene.

(xv) Vinyl resinous substance, as the basic polymers:

- Polyvinyl acetate.
- Polyvinyl alcohol.
- Polyvinyl butyral.
- Polyvinyl chloride.
- Polyvinyl formal.
- Polyvinylidene chloride.
- Polyvinyl pyrrolidone.
- Polyvinyl stearate.
- Vinyl chloride-acetate, hydroxyl-modified copolymer.
- Vinyl chloride-acetate, hydroxyl-modified copolymer, reacted with trimellitic anhydride.
- Vinyl chloride copolymerized with one or more of the following substances:
  - Acrylonitrile.
  - Fumaric acid and/or its methyl, ethyl, propyl, butyl, amyl, hexyl, heptyl, or octyl esters.
  - Maleic acid and/or its methyl, ethyl, propyl, butyl, amyl, hexyl, heptyl, or octyl esters.
  - Vinyl acetate.
  - Vinylidene chloride.

(xvi) Cellulosics, as the basic polymers:

- Carboxymethylcellulose.
- Cellulose acetate.
- Cellulose acetate-butyrate.
- Cellulose acetate-propionate.
- Ethylcellulose.
- Ethyl hydroxyethylcellulose.
- Hydroxyethylcellulose.
- Hydroxypropyl methylcellulose.
- Methylcellulose.
- Nitrocellulose.

(xvii) Styrene polymers, as the basic polymer:

- Polystyrene.
- α-Methyl styrene polymer.
- Styrene copolymerized with one or more of the following:
  - Acrylonitrile.
  - α-Methyl-styrene.

(xviii) Polyethylene and its copolymers as the basic polymer:

- Ethylene-acrylic acid copolymer containing not more than 8 percent by weight of acrylic acid.
- Ethylene-ethyl acrylate copolymer.
- Ethylene-vinyl acetate copolymer.
- Polyethylene.

(xix) Polypropylene.

(xx) Acrylics and their copolymers, as the basic polymer:

- Acrylamide with ethylacrylate and/or styrene and/or methacrylic acid, subsequently reacted with formaldehyde and butanol.
- Acrylic acid and the following esters thereof:
  - Ethyl.
  - Methyl.
- Methacrylic acid and the following esters thereof:
  - Butyl.
  - Ethyl.
  - Methyl.
- Methacrylic acid or its ethyl and methyl esters copolymerized with one or more of the following:
  - Acrylic acid.
  - Ethyl acrylate.
  - Methyl acrylate.

(xxi) Elastomers, as the basic polymer:

- Butadiene-acrylonitrile copolymer.
- Butadiene-acrylonitrile-styrene copolymer.
- Butadiene-styrene copolymer.
- Butyl rubber.
- Chlorinated rubber.
- 2-Chloro-1,3-butadiene (neoprene).
- Natural rubber (natural latex or natural latex solids, smoked or unsmoked).
- Polyisobutylene.
- Rubber hydrochloride.
- Styrene-isobutylene copolymer.

(xxii) Driers made by reaction of a metal from (*a*) of this subdivision with acid, to form the salt listed in (*b*) of this subdivision:

(*a*) Metals:

- Aluminum.
- Calcium.
- Cerium.
- Cobalt.
- Iron.
- Lithium.
- Magnesium.
- Manganese.
- Zinc.
- Zirconium.

(*b*) Salts:

- Caprate.
- Caprylate.
- Isodecanoate.
- Linoleate.
- Naphthenate.
- Neodecanoate.
- Octoate (2-ethylhexoate).
- Oleate.
- Palmitate.
- Resinate.
- Ricinoleate.
- Soyate.
- Stearate.
- Tallate.

(xxiii) Waxes:

- Paraffin, Type I.
- Paraffin, Type II.
- Polyethylene.
- Sperm oil.
- Spermaceti.

(xxiv) Plasticizers:

- Acetyl tributyl citrate.
- Acetyl triethyl citrate.
- Butyl phthalyl butyl glycolate.
- Butyl stearate.
- *p-tert*-Butyl phenyl salicylate.
- Dibutyl sebacate.
- Diethyl phthalate.
- Diisobutyl adipate.

Diisooctyl phthalate.
Epoxidized soybean oil (iodine number maximum 14; oxirane oxygen content 6% minimum), as the basic polymer.
Ethyl phthalyl ethyl glycolate.
2-Ethylhexyl diphenyl phosphate.
di-2-Ethylhexyl phthalate.
Glycerol.
Glyceryl monooleate.
Glyceryl triacetate.
Monoisopropyl citrate.
Propylene glycol.
Sorbitol.
Mono-, di-, and tristearyl citrate.
Triethyl citrate.
Triethylene glycol.
3(2-Xenoxyl)-1,2-epoxypropane.

(xxv) Release agents, as the basic polymer, when applicable:

N,N'-Distearoyl ethylenediamine.
Linoleic acid amide.
Oleic acid amide.
Palmitic acid amide.
Petrolatum.
Polyethylene glycol (mol. wt. greater than 300).
Polyethylene wax.
Polyoxyethylene glycol monooleate (mol. wt. of the polyoxyethylene glycol moiety greater than 300).
Polytetrafluoroethylene.
Silicones (not less than 300 centistokes viscosity: Polysiloxanes containing dimethyl- and/or methyl-phenyl groups on the silicon atom.

(xxvi) Pigments and colorants:

Aluminum.
Aluminum hydrate.
Aluminum and potassium silicate (mica).
Aluminum mono-, di-, tristearate.
Aluminum silicate (china clay).
Barium sulfate.
Bentonite.
Bentonite, modified with dimethyl dioctadecyl ammonium ion.
Burnt umber.
Calcium carbonate.
Calcium silicate.
Calcium sulfate.
Carbon black (channel process).
Cobalt oxide-aluminum oxide.
Copper phthalocyanine.
Diatomaceous earth.
Iron oxides.
Magnesium oxide.
Magnesium silicate (talc).
Raw sienna.
Silica.
Tartrazine lake (certified FDC Yellow No. 5 only).
Titanium dioxide.
Titanium dioxide-barium sulfate.
Titanium dioxide-magnesium silicate.
Zinc oxide.

(xxvii) Surface lubricants:

Cottonseed oil and other edible oils.
Dibutyl sebacate.
Dioctyl sebacate.
Glyceryl monostearate.
Lanolin.
Mineral oil, white.
Palm oil.
Paraffin, Type I.
Paraffin, Type II.
Petrolatum.
Stearic acid.

(xxviii) Silicones, as the basic polymers, and their curing catalysts:

(*a*) Silicones:

Methyl hydrogen polysiloxane.
Dimethyl polysiloxane.
Methylphenyl polysiloxane.

(*b*) Catalysts (the maximum amount of tin catalyst used shall be that required to effect optimum cure but shall not exceed one part of tin per 100 parts of silicone polymer solids):

Dibutyltin dilaurate.
Tetrabutyl titanate.
Tin oleate.

(xxix) Surface active agents:

Sodium dioctyl sulfosuccinate.
Sodium dodecyl benzenesulfonate.
Sodium lauryl sulfate.

(xxx) Antioxidants:

Butylated hydroxyanisole.
Butylated hydroxytoluene.
Gum guaiac.
Dilauryl thiodipropionate.
Nordihydroguaiaretic acid.
Propyl gallate.
Distearyl thiodipropionate.
Thiodipropionic acid.
2,4,5-Trihydroxybutyrophenone.

(xxxi) *Can end cements (sealing compounds used for sealing can ends only)*. In addition to the substances listed in subdivisions (i) to (xxx), inclusive, of this subparagraph, the following may be used:

Butadiene-styrene-fumaric acid copolymer.
4,4'-Butylidenebis(6-*tert*-butyl-*m*-cresol).
Dibenzamido phenyl disulfide.
Di-β-naphthyl phenylenediamine.
Dipentamethylene thiuram tetrasulfide.
Sodium decylbenzene sulfonate.
Sodium phenylphenate.
Tetrasodium EDTA (tetrasodium ethylenediaminetetraacetate).
Tri (mixed mono- and dinonylphenyl) phosphite.
Zinc dibutyldithiocarbamate.

(xxxii) *Side seam cements.* In addition to the substances listed in subdivisions (i) to (xxx), inclusive, of this subparagraph, the following may be used:

p-*tert*-Butyl perbenzoate as a catalyst for epoxy resin.
Ethyl toluene sulfonamide.
Polyamides derived from the following acids and amines:
  Acids:
    Sebacic.
    Vegetable oil acids (with or without dimerization).
  Amines:
    Diethylenetriamine.
    Diphenylamine.
    Ethylenediamine.
    Tetraethylenepentamine.
    Triethylenetetramine.
  Toluene sulfonamide formaldehyde resin (basic polymer).
Triethylene glycol methacrylate for use only as polymerization cross-linking agent in side seam cements for containers intended for use in contact with food only of the types identified in paragraph (d) of this section, table 1, under categories I, II, and VI.

(xxxiii) Miscellaneous materials:

Ammonium citrate.
Ammonium potassium phosphate.
Calcium acetate.
Calcium ethyl acetoacetate.
Calcium glycerophosphate.
Calcium, sodium, and potassium oleates.
Calcium, sodium, and potassium ricinoleates.
Calcium, sodium, and potassium stearates.
Castor oil, hydrogenated.
Cetyl alcohol.
Decyl alcohol.
Dicumyl peroxide for use only as polymerization catalyst.
Diisodecyl phthalate for use only as plasticizer in side seam cements for containers intended for use in contact with food only of the types identified in paragraph (d) of this section, table 1, under categories I, II, and VI.
Disodium hydrogen phosphate.
Ethyl acetoacetate.
Lauryl alcohol.
Lecithin.
Magnesium, sodium, and potassium citrate.
Magnesium glycerophosphate.
Magnesium stearate.
Mono-, di-, and tricalcium phosphate.
Monodibutylamine pyrophosphate as sequestrant for iron.
Mono-, di-, and trimagnesium phosphate.
Myristyl alcohol.
Octyl alcohol.
Phosphoric acid.
Poly(ethylene oxide).
Sodium pyrophosphate.
Stearyl alcohol.
Tetrasodium pyrophosphate.
Tin chloride.
Tin stearate.
Tin sulfate.

(xxxiv) Polyamide resins derived from dimerized vegetable oil acids (containing not more than 20 percent of monomer acids) and ethylenediamine, as the basic resin, for use only in coatings that contact food at temperatures not to exceed room temperature.

(c) The coating in the finished form in which it is to contact food, when extracted with the solvent or solvents characterizing the type of food, and under conditions of time and temperature characterizing the conditions of its intended use as determined from Tables 1 and 2 of paragraph (d) of this section, shall yield chloroform-soluble extractives, corrected for zinc extractives as zinc oleate, not to exceed the following:

(1) From a coating intended for or employed as a component of a container not to exceed 1 gallon and intended for one-time use, not to exceed 0.5 milligram per square inch nor to exceed that amount as milligrams per square inch that would equal 0.005 percent of the water capacity of the container, in milligrams, divided by the area of the food-contact surface of the container in square inches. From a fabricated container conforming with the description in this subparagraph, the extractives shall not exceed 0.5 milligram per square inch of food-contact surface nor exceed 50 parts per million of the water capacity of the container as determined by the methods provided in paragraph (e) of this section.

(2) From a coating intended for or employed as a component of a container having a capacity in excess of 1 gallon and intended for one-time use, not to exceed 1.8 milligrams per square inch nor to exceed that amount as milligrams per square inch that would equal 0.005 percent of the water capacity of the container in milligrams, divided by the area of the food-contact surface of the container in square inches.

(3) From a coating intended for or employed as a component of a container for repeated use, not to exceed 18 milligrams per square inch nor to exceed that amount as milligrams per square inch that would equal 0.005 percent of the water capacity of the container in milligrams, divided by the area of the food-contact surface of the container in square inches.

(4) From coating intended for repeated use, and employed other than as a component of a container, not to exceed 18 milligrams per square inch of coated surface.

(d) Tables:

TABLE 1.—*Types of food*

- I. Nonacid (pH above 5.0), aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
- II. Acidic (pH 5.0 or below), aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
- III. Aqueous, acid or nonacid products containing free oil or fat; may contain salt, and including water-in-oil emulsions of low or high fat content.
- IV. Dairy products and modifications:
  - A. Water-in-oil emulsion, high or low fat.
  - B. Oil-in-water emulsion, high or low fat.
- V. Low moisture fats and oils.
- VI. Beverages:
  - A. Containing alcohol.
  - B. Nonalcoholic.
- VII. Bakery products.
- VIII. Dry solids (no end test required).

TABLE 2.—*Test procedures for determining the amount of extractives from resinous or polymeric coatings, using solvents simulating types of foods and beverages*

Condition of use	Types of food (see table 1)	Extractant		
		Water	Heptane [1] [2]	8% alcohol
		Time and temperature	*Time and temperature*	*Time and temperature*
A. High temperature heat-sterilized (e.g., over 212° F.).	I, IV-B	250° F., 2 hr		
	III, IV-A, VII	250° F., 2 hr	150° F., 2 hr	
B. Boiling water sterilized	II	212° F., 30 min		
	III, VII	212° F., 30 min	120° F., 30 min	
C. Hot filled or pasteurized above 150° F.	II, IV-B	Fill boiling, cool to 100° F.		
	III, IV-A	Fill boiling, cool to 100° F.	120° F., 15 min	
	V		120° F., 15 min	
D. Hot filled or pasteurized below 150° F.	II, IV-B, VI-B	150° F., 2 hr		
	III, IV-A	150° F., 2 hr	100° F., 30 min	
	V		100° F., 30 min	
	VI-A			150° F., 2 hr.
E. Room temperature filled and stored (no thermal treatment in the container).	I, II, IV-B, VI-B	120° F., 24 hr		
	III, IV-A	120° F., 24 hr	70° F., 30 min	
	V, VII		70° F., 30 min	
	VI-A			120° F., 24 hr.
F. Refrigerated storage (no thermal treatment in the container).	I, II, III, IV-A, IV-B, VI-B, VII.	70° F., 48 hr		
	VI-A			70° F., 48 hr.
G. Frozen storage (no thermal treatment in the container).	I, II, III, IV-B, VII.	70° F., 24 hr		
H. Frozen storage: Ready-prepared foods intended to be reheated in container at time of use:				
1. Aqueous or oil in water emulsion of high or low fat.	I, II, IV-B	212° F., 30 min		
2. Aqueous, high or low free oil or fat.	III, IV-A, VII	212° F., 30 min	120° F., 30 min	

[1] Heptane extractant not to be used on wax-lined containers.

[2] Heptane extractivity results must be divided by a factor of five in arriving at the extractivity for a food product.

(e) *Analytical methods*—(1) *Selection of extractability conditions.* First ascertain the type of food product (Table 1, paragraph (d) of this section) that is being packed commercially in the test container and the normal conditions of thermal treatment used in packaging the type of food involved. Using Table 2 (paragraph (d) of this section), select the food-simulating solvent or solvents (demineralized distilled water, heptane, and/or 8 percent ethyl alcohol) and the time-temperature exaggerations of the container-use conditions. Aqueous products (types I, II, IV-B, and VI-B) require only a water-extractability test at the temperature and time conditions shown for the most severe "conditions of use." Aqueous products with free oil or fat and water-oil emulsions (types III, IV-A, and VII) will require determinations of both water extractability and heptane extractability. Low-moisture fats and oils (type V with no free water) require only the heptane extractability. Alcoholic beverages (type VI-A) require only the 8 percent alcohol extractant. Having selected the appropriate extractant or extractants simulating various types of foods and beverages and the time-temperature exaggerations over normal use, follow the applicable extraction procedure. Adapt the procedure, when necessary, for containers having a capacity of over 1 gallon.

(2) *Selection of coated-container samples.* For consumer-sized containers up to 1 gallon, quadruplicate samples of representative containers (using for each replicate sample the number of containers nearest to an area of 180 square inches) should be selected from the lot to be examined.

(3) *Cleaning procedure preliminary to determining the amount of extractables from coated containers.* Quadruplicate samples of representative containers should be selected from the lot to be examined and must be carefully rinsed to remove extraneous material prior to the actual extraction procedure. Soda fountain pressure-type hot water rinsing equipment, consisting in its simplest form of a ⅛-inch—¼-inch internal diameter metal tube attached to a hot water line and bent so as to direct a stream of water upward, may be used. Be sure hot water has reached a temperature of 190° F.–200° F. before starting to rinse the container. Invert the container over the top of the fountain and direct a strong stream of hot water against the bottom and all sides for 1 minute, drain, and allow to dry.

(4) *Exposure conditions*—(i) *Water (250° F. for 2 hours), simulating high-temperature heat sterilization.* Fill the container within ¼-inch of the top with a measured volume of demineralized distilled water. Cover the container with clean aluminum foil and place the container on a rack in a pressure cooker. Add a small amount of demineralized distilled water to the pressure cooker, but do not allow the water to touch the bottom of the container. Close the cooker securely and start to heat over a suitable burner. When a steady stream of steam emerges from the vent, close the vent and allow the pressure to rise to 15 pounds per square inch (250° F.) and continue to maintain this pressure for 2 hours. Slowly release the pressure, open the pressure cooker when the pressure reads zero, and composite the water of each replicate immediately in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(ii) *Water (212° F. for 30 minutes), simulating boiling water sterilization.* Fill the container within ¼-inch of the top with a measured volume of boiling, demineralized distilled water. Cover the container with clean aluminum foil and place the container on a rack in a pressure cooker in which a small amount of demineralized distilled water is boiling. Do not close the pressure vent, but operate at atmospheric pressure so that there is a continuous escape of a small amount of steam. Continue to heat for 30 minutes, then remove the test container and composite the contents of each replicate immediately in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(iii) *Water (from boiling to 100° F.), simulating hot fill or pasteurization above 150° F.* Fill the container within ¼-inch of the top with a measured volume of boiling, demineralized distilled water. Insert a thermometer in the water and allow the uncovered container to stand in a room at 70° F.–85° F. When the temperature reads 100° F., composite the water from each replicate immediately in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(iv) *Water (150° F. for 2 hours), simulating hot fill or pasteurization below 150° F.* Preheat demineralized distilled water to 150° F. in a clean Pyrex flask. Fill the container within ¼-inch of the top with a measured volume of the 150° F. water and cover with clean aluminum foil. Place the test container in an oven maintained at 150° F. After 2 hours, remove the test container from the oven and immediately composite the water of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(v) *Water (120° F. for 24 hours), simulating room temperature filling and storage.* Preheat demineralized distilled water to 120° F. in a clean Pyrex flask. Fill the container within ¼-inch of the top with a measured volume of the 120° F. water and cover with clean aluminum foil. Place the test container in an incubator or oven maintained at 120° F. After 24 hours, remove the test container from the incubator and immediately composite the water of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(vi) *Water (70° F. for 48 hours), simulating refrigerated storage.* Bring demineralized distilled water to 70° F. in a clean Pyrex flask. Fill the container within ¼-inch of the top with a measured volume of the 70° F. water, and cover with clean aluminum foil. Place the test container in a suitable room maintained at 70° F. After 48 hours, immediately composite the water of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(vii) *Water (70° F. for 24 hours), simulating frozen storage.* Bring demineralized distilled water to 70° F. in a clean Pyrex flask. Fill the container within ¼-inch of the top with a measured volume of the 70° F. water and cover with clean aluminum foil. Place the container in a suitable room maintained at 70° F. After 24 hours, immediately composite the water of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(viii) *Water (212° F. for 30 minutes), simulating frozen foods reheated in the container.* Fill the container to within ¼-inch of the top with a measured volume of boiling demineralized distilled water. Cover the container with clean aluminum foil and place the container on a rack in a pressure cooker in which a small amount of demineralized distilled water is boiling. Do not close the pressure vent, but operate at atmospheric pressure so that there is a continuous escape of a small amount of steam. Continue to heat for 30 minutes, then remove the test container and composite the contents of each replicate immediately in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(ix) *Heptane (150° F. for 2 hours), simulating high-temperature heat sterilization for fatty foods only.* Preheat redistilled reagent-grade heptane (boiling point 208° F.) carefully in a clean Pyrex flask on a water bath or nonsparking hot plate in a well-ventilated hood to 150° F. At the same time, preheat a pressure cooker or equivalent to 150° F. in an incubator. This pressure cooker is to serve only as a container for the heptane-containing test package inside the incubator in order to minimize the danger of explosion. Fill the test container within ¼-inch of the top with a measured volume of the 150° F. heptane and cover with clean aluminum foil. Place the test container in the preheated pressure cooker and then put the assembly into a 150° F. incubator. After 2 hours, remove the pressure cooker from the incubator, open the assembly, and immediately composite the heptane of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(x) *Heptane (120° F. for 30 minutes), simulating boiling water sterilization of fatty foods only.* Preheat redistilled reagent-grade heptane (boiling point 208° F.) carefully in a clean Pyrex flask on a water bath or nonsparking hot plate in a well-ventilated hood to 120° F. At the same time, preheat a pressure cooker or equivalent to 120° F. in an incubator. This pressure cooker is to serve only as a vented container for the heptane-containing test package inside the incubator in order to minimize the danger of explosion. Fill the test container within ¼-inch of the top with a measured volume of the 120° F. heptane and cover with clean aluminum foil. Place the test container in the preheated pressure cooker and then put the assembly into a 120° F. incubator. After 30 minutes, remove the pressure cooker from the incubator, open the assembly, and immediately composite the heptane of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xi) *Heptane (120° F. for 15 minutes), simulating hot fill or pasteurization above 150° F. for fatty foods only.* Preheat redistilled reagent-grade heptane (boiling point 208° F.) carefully in a clean Pyrex flask on a water bath or nonsparking hot plate in a well-ventilated hood to 120° F. At the same time, preheat a pressure cooker or equivalent to 120° F. in an incubator. This pressure cooker is to serve only as a container for the heptane-containing test package inside the incubator in order to minimize the danger of explosion. Fill the test container within ¼-inch of the top with a measured volume of the 120° F. heptane and cover with clean aluminum foil. Place the test container in the preheated pressure cooker and then put the assembly into a 120° F. incubator. After 15 minutes, remove the pressure cooker from the incubator, open the assembly, and immediately composite the heptane of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xii) *Heptane (100° F. for 30 minutes), simulating hot fill or pasteurization below 150° F. for fatty foods only.* Preheat redistilled reagent-grade heptane (boiling point 208° F.) carefully in a clean Pyrex flask on a water bath or nonsparking hot plate in a well-ventilated hood to 100° F. At the same time, preheat a pressure cooker or equivalent to 100° F. in an incubator. This pressure cooker is to serve only as a container for the heptane-containing test package inside the incubator in order to minimize the danger of explosion. Fill the test container within ¼-inch of the top with a measured volume of the 100° F. heptane and cover with clean aluminum foil. Place the test container in the preheated pressure cooker and then put the assembly into a 100° F. incubator. After 30 minutes, remove the pressure cooker from the incubator, open the assembly and immediately composite the heptane of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xiii) *Heptane (70° F. for 30 minutes), simulating room temperature filling and storage of fatty foods only.* Fill the test container within ¼-inch of the top with a measured volume of the 70° F. heptane and cover with clean aluminum foil. Place the test container in a suitable room maintained at 70° F. After 30 minutes, composite the heptane of each replicate in a clean Pyrex flask or beaker. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xiv) *Heptane (120° F. for 30 minutes), simulating frozen fatty foods reheated in the container.* Preheat redistilled reagent-grade heptane (boiling point 208° F.) carefully in a clean Pyrex flask on a water bath or hot plate in a well-ventilated hood to 120° F. At the same time, preheat a pressure cooker to 120° F. in an incubator. This pressure cooker is to serve only as a container for the heptane-containing test package inside the incubator in order to minimize the danger of explosion. Fill the test container within ¼-inch of the top with a measured volume of the 120° F. heptane and cover with clean aluminum foil. Place the test container in the preheated pressure cooker and then put the assembly into a 120° F. incubator. After 30 minutes, remove the pressure cooker from the incubator, open the assembly and immediately composite the heptane from each replicate into a clean Pyrex flask. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xv) *Alcohol—8 percent (150° F. for 2 hours), simulating alcoholic beverages hot filled or pasteurized below 150° F.* Preheat 8 percent (by volume) ethyl alcohol in demineralized distilled water to 150° F. in a clean Pyrex flask. Fill the test container with within ¼-inch of the top with a measured volume of the 8 percent alcohol. Cover the container with clean aluminum foil and place in an oven maintained at 150° F. After 2 hours, remove the container from the oven and immediately composite the alcohol from each replicate in a clean Pyrex flask. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xvi) *Alcohol—8 percent (120° F. for 24 hours), simulating alcoholic beverages room-temperature filled and stored.* Preheat 8 percent (by volume) ethyl alcohol in demineralized distilled water to 120° F. in a clean Pyrex flask. Fill the test container within ¼-inch of the top with a measured volume of the 8 percent alcohol, cover the container with clean aluminum foil and place in an oven or incubator maintained at 120° F. After 24 hours, remove the container from the oven or incubator and immediately composite the alcohol from each replicate into a clean Pyrex flask. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

(xvii) *Alcohol—8 percent (70° F. for 48 hours), simulating alcoholic beverages in refrigerated storage.* Bring 8 percent (by volume) ethyl alcohol in demineralized distilled water to 70° F. in a clean Pyrex flask. Fill the test container within ¼-inch of the top with a measured volume of the 8 percent alcohol. Cover the container with clean aluminum foil. Place the test container in a suitable room maintained at 70° F. After 48 hours, immediately composite the alcohol from each replicate into a clean Pyrex flask. Proceed with the determination of the amount of extractives by the method described in subparagraph (5) of this paragraph.

NOTE: The tests specified in subparagraph (4)(i) through (xvii) of paragraph (e) are applicable to flexible packages consisting of coated metal contacting food, in which case the closure end is double-folded and clamped with metal spring clips by which the package can be suspended.

(5) *Determination of amount of extractives*—(i) *Total residues.* Evaporate the food-simulating solvents from subparagraph (4)(i) to (xvii), inclusive, of this paragraph to about 100 milliliters in the Pyrex flask and transfer to a clean, tared platinum dish, washing the flask three times with the solvent used in the extraction procedure, and evaporate to a few milliliters on a nonsparking low-temperature hotplate. The last few milliliters should be evaporated in an oven maintained at a temperature of 212° F. Cool the platinum dish in a desiccator for 30 minutes and weigh the residue to the nearest 0.1 milligram (*e*). Calculate the extractives in milligrams per square inch and in parts per million for the particular size of container being tested and for the specific food-simulating solvent used.

(*a*) *Water and 8-percent alcohol.*

Milligrams extractives per square inch=

$$\frac{e}{s}$$

Extractives residue=*Ex*=

$$\frac{(e)(a)(1000)}{(c)(s)}.$$

(*b*) *Heptane.*

Milligrams extractives per square inch=

$$\frac{e}{(s)(F)}.$$

Extractives residue=*Ex*=

$$\frac{(e)(a)(1000)}{(c)(s)(F)}$$

Where:

e=Extractives residue in parts per million for any container size.
Ex=Milligrams extractives per sample tested.
a=Total coated area, including closure, in square inches.
c=Water capacity of container, in grams.
s=Surface of coated area tested, in square inches.
F=Five, the ratio of the amount of extractives removed from a coated container by heptane under exaggerated time-temperature test conditions compared to the amount extracted by a fat or oil from a container tested under exaggerated conditions of thermal sterilization and use.
e'=Chloroform-soluble extractives residue.
ee'=Zinc corrected chloroform-soluble extractive residuce.

e' or *ee'* is substituted for *e* in the above equations when necessary.

If when calculated by the equations in (*a*) and (*b*) of this subdivision, the concentration of extractives residue (*Ex*) exceeds 50 parts per million or the extractives in milligrams per square inch exceed the limitations prescribed in paragraph (c) of this section for the particular container size, proceed to subdivision (ii) of this subparagraph (method for determining the amount of chloroform-soluble extractives residue).

(ii) *Chloroform-soluble extractives residue.* Add 50 milliliters of chloroform (freshly distilled reagent grade or a grade having an established consistently low blank) to the dried and weighed residue, (*e*), in the platinum dish, obtained in subdivision (i) of this subparagraph. Warm carefully, and filter through Whatman No. 41 filter paper in a Pyrex funnel, collecting the filtrate in a clean, tared platinum dish. Repeat the chloroform extraction, washing the filter paper with this second portion of chloroform. Add this filtrate to the original filtrate and evaporate the total down to a few milliliters on a low-temperature hotplate. The last few milliliters should be evaporated in an oven maintained at 212° F. Cool the platinum dish in a desiccator for 30 minutes and weigh to the nearest 0.1 milligram to get the chloroform-soluble extractives residue (*e'*). This *e'* is substituted for *e* in the equations in (*a*) and (*b*) of subdivision (i) of this subparagraph. If the concentration of extractives (*Ex*) still exceeds 50 parts per million or the extractives in milligrams per square inch exceed the limitations prescribed in paragraph (c) of this section for the particular container size, proceed as follows to correct for zinc extractives ("C" enamels only): Ash the residue in the platinum dish by heating gently over a Meeker-type burner to destroy organic matter and hold at red heat for about 1 minute. Cool in the air for 3 minutes, and place the platinum dish in the desiccator for 30 minutes and weigh to the nearest 0.1 milligram. Analyze this ash for zinc by standard Association of Official Agricultural Chemists methods or equivalent. Calculate the zinc in the ash as zinc oleate, and subtract from the weight of chloroform-soluble extractives residue (*e'*) to obtain the zinc-corrected chloroform-soluble extractives residue (*ee'*). This *ee'* is substituted for *e* in the formulas in (*a*) and (*b*) of subdivision (i) of this subparagraph. To comply with the limitations in paragraph (c) of this section, the chloroform-soluble extractives residue (but after correction for zinc extractives in case of "C" enamels) must not exceed 50 parts per million and must not exceed in milligrams per square inch the limitations for the particular article as prescribed in paragraph (c) of this section.

(f) *Equipment and reagent requirements*—(1) *Equipment.*

Rinsing equipment, soda fountain pressure-type hot water, consisting in simplest form of a ⅛-inch–¼-inch inside diameter metal tube attached to a hot water line delivering 190° F.–200° F. water and bent so as to direct a stream of water upward.

Pressure cooker, 21-quart capacity with pressure gage, safety release, and removable rack, 12.5 inches inside diameter x 11 inches inside height, 20 pounds per square inch safe operating pressure.

Oven, mechanical convection, range to include 120° F.–212° F. explosion-proof, inside dimensions (minimum), 19'' x 19'' x 19'', constant temperature to ±2° F. (water bath may be substituted).

Incubator, inside dimensions (minimum) 19'' x 19'' x 19'' for use at 100° F.±2° F. explosion proof (water bath may be substituted).

Constant-temperature room or chamber 70° F.±2° F., minimum inside dimensions 19'' x 19'' x 19''.

Hot plate, nonsparking (explosion proof), top 12'' x 20'', 2,500 watts, with temperature control.

Platinum dish, 100-milliliter capacity minimum.

All glass, Pyrex or equivalent.

(2) Reagents:

Water, all water used in extraction procedure should be freshly demineralized (deionized) distilled water.

Heptane, reagent grade, freshly redistilled before use, using only material boiling at 208° F.

Alcohol, 8 percent (by volume), prepared from undenatured 95 percent ethyl alcohol diluted with demineralized or distilled water.

Chloroform, reagent grade, freshly redistilled before use, or a grade having an established, consistently low blank.

Filter paper, Whatman No. 41 or equivalent.

(g) In accordance with good manufacturing practice, finished coatings intended for repeated food-contact use shall be thoroughly cleansed prior to their first use in contact with food.

§ 121.2515 Chelating agents used in the manufacture of paper and paperboard.

The substances named in paragraph (a) of this section may be safely used in the manufacture of paper and paperboard, in accordance with the conditions prescribed in paragraphs (b) and (c) of this section:

(a) Chelating agents:

List of substances:	*Limitations*
Ammonium fructoheptonate	------
Ammonium glucoheptonate	------
Disodium ethylenediamine tetraacetate	------
Pentasodium salt of diethylenetriamine pentaacetate	------
Sodium fructoheptonate	------
Sodium glucoheptonate	------
Tetrasodium ethylenediamine tetraacetate	------
Trisodium *N*-hydroxyethyl ethylenediamine triacetate	------

(b) Any one or any combination of the substances named is used or intended for use as chelating agents.

(c) The substances are added in an amount not greater than that required to accomplish the intended technical effect nor greater than any specific limitation, where such is provided.

§ 121.2516 Sodium nitrate-urea complex.

Sodium nitrate-urea complex may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Sodium nitrate-urea complex is a clathrate of approximately two parts urea and one part sodium nitrate.

(b) Sodium nitrate-urea complex conforming to the limitations prescribed in subparagraph (1) of this paragraph is used as provided in subparagraph (2) of this paragraph.

(1) *Limitations.* (i) It is used as a plasticizer in glassine and greaseproof paper.

(ii) The amount used does not exceed that required to accomplish its intended technical effect or exceed 15 percent by weight of the finished paper.

(2) *Conditions of use.* The glassine and greaseproof papers are used for packaging dry food or as the food-contact surface for dry food.

§ 121.2517 [Reserved]

§ 121.2518 Chromium (Cr III) complex of *N*-ethyl-*N*-heptadecylfluoro-octane sulfonyl glycine.

The chromium (Cr III) complex of *N*-ethyl-*N*-heptadecylfluoro-octane sulfonyl glycine containing up to 20 percent by weight of the chromium (Cr III) complex of heptadecylfluoro-octane sulfonic acid may be safely used as a component of paper for packaging dry food when used in accordance with the following prescribed conditions:

(a) The food additive is used as a component of paper in an amount not to exceed 0.5 percent by weight of the paper.

(b)(1) The food-contact surface of the paper is overcoated with a polymeric or resinous coating at least ⅓-mil in thickness, that meets the provision of § 121.2526; or

(2) The treated paper forms one or more plies of a paper in a multiwall bag and is separated from the food by at least one ply of packaging films or grease-resistant papers which serves as a functional barrier between the food additive and the food. Such packaging films or grease-resistant papers conform with appropriate food additive regulations.

(c) The labeling of the food additive shall contain adequate directions for its use to insure compliance with the requirements of paragraphs (a) and (b) of this section.

§ 121.2519 Defoaming agents used in the manufacture of paper and paperboard.

Defoaming agents may be safely used in the manufacture of paper and paperboard intended for use in packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) The defoaming agents are prepared from one or more of the subtances named in paragraph (d) of this section, subject to any prescribed limitations.

(b) The defoaming agents are used to prevent or control the formation of foam during the manufacture of paper and paperboard prior to and during the sheet-forming process.

(c) The quantity of defoaming agent or agents added during the manufacturing process shall not exceed the amount necessary to accomplish the intended technical effect.

(d) Substances permitted to be used in the formulation of defoaming agents include substances subject to prior sanctions or approval for such use and employed subject to the conditions of such sanctions or approvals, substances generally recognized as safe for use in food, substances generally recognized as safe for use in paper and paperboard, and substances listed in this paragraph, subject to the limitations, if any, prescribed.

(1) Fatty triglycerides, and the fatty acids, alcohols, and dimers derived therefrom:

Beef tallow.
Castor oil.
Coconut oil.
Corn oil.
Cottonseed oil.
Fish oil.
Lard oil.
Linseed oil.
Mustardseed oil.
Palm oil.
Peanut oil.
Rapeseed oil.
Ricebran oil.
Soybean oil.
Sperm oil.
Tall oil.

(2) Fatty triglycerides, and marine oils, and the fatty acids and alcohols derived therefrom (subparagraph (1) of this paragraph) reacted with one or more of the following, with or without dehydration, to form chemicals of the category indicated in parentheses:

Aluminum hydroxide (soaps).
Ammonia (amides).
Butanol (esters).
Butoxy-polyoxypropylene, molecular weight 1,000–2,500 (esters).
Butylene glycol (esters).
Calcium hydroxide (soaps).
Diethanolamine (amides).
Diethylene glycol (esters).
Ethylene glycol (esters).
Ethylene oxide (esters and ethers).
Glycerin (mono- and diglycerides).
Hydrogen (hydrogenated compounds).
Hydrogen (amines).
Isobutanol (esters).
Isopropanol (esters).
Magnesium hydroxide (soaps).
Methanol (esters).
Morpholine (soaps).
Oxygen (air-blown oils).
Pentaerythritol (esters).
Polyoxyethylene, molecular weights 200, 300, 400, 600, 700, 1,000, 1,540, 1,580, 1,760, 4,000 (esters).
Polyoxypropylene, molecular weight 200–2,000 (esters).
Potassium hydroxide (soaps).
Propanol (esters).
Propylene glycol (esters).
Propylene oxide (esters).
Sodium hydroxide (soaps).
Sorbitol (esters).
Sulfuric acid (sulfated and sulfonated compounds).
Triethanolamine (amides and soaps).
Triisopropanolamine (amides and soaps).
Trimethylolethane (esters).
Zinc hydroxide (soaps).

(3) Miscellaneous:

Alcohols and ketone alcohols mixture (still-bottom product from C_{12}-C_{18} alcohol manufacturing process).
Amyl alcohol.
Butoxy polyethylene polypropylene glycol molecular weight 900–4,200.
Butoxy-polyoxypropylene molecular weight 1,000–2,500.
Butylated hydroxyanisole.
Butylated hydroxytoluene.
Calcium lignin sulfonate.
Capryl alcohol.
p-Chlorometacresol.
Cyclohexanol.
Diacetyltartaric acid ester of tallow monoglyceride.
Diethanolamine.
Diethylene triamine.
Di-(2-ethylhexyl) phthalate.
2,6-Dimethyl heptanol-4 (nonyl alcohol).
Dimethylpolysiloxane.
Di-*tert*-butyl hydroquinone.
Dodecylbenzene sulfonic acids.
Ethanol.
2-Ethylhexanol.
Ethylenediamine tetraacetic acid tetrasodium salt.
Formaldehyde.
Heavy oxo-fraction (a still-bottom product of iso-octyl alcohol manufacture, of approximate composition: Octyl alcohol 5 percent nonyl alcohol 10 percent, decyl and higher alcohols 35 percent, esters 45 percent, and soaps 5 percent).
2-Heptadecenyl-4-methyl-4-hydroxymethyl-2-oxazoline.
Hexylene glycol (2-methyl-2,4-pentanediol).
12-Hydroxystearic acid.
Isobutanol.
Isopropanol.
Isopropylamine salt of dodecylbenzene sulfonic acid.
Kerosine.
Lanolin.
Methanol.
Methyl 12-hydroxystearate.
Methyl taurine-oleic acid condensate, molecular weight 486.
Mineral oil.
Mono-, di-, and triisopropanolamine.
Mono- and diisopropanolamine stearate.
Monobutyl ether of ethylene glycol.
Monoethanolamine.
Morpholine.
Myristyl alcohol.
Naphtha.
β-Naphthol.
Nonylphenol.

Odorless light petroleum hydrocarbons.
Oleyl alcohol.
Petrolatum.
o-Phenylphenol.
Pine oil.
Polyethylene.
Polyethylene, oxidized (air-blown).
Polyoxyethylene (1.5–15 mols) alkyl (C_8, C_9, or C_{12}) phenol.
Polyoxyethylene (4 mols) decyl phosphate.
Polyoxyethylene (4 mols) di(2-ethyl hexanoate).
Polyoxyethylene (15 mols) ester of rosin.
Polyoxyethylene (3–15 mols) tridecyl alcohol.
Polyoxypropylene, molecular weight 200–2,000.
Polyoxyropylene-polyoxyethylene condensate, molecular weight 950–2,750.
Polyoxypropylene-ethylene oxide condensate of ethylene diamine, molecular weight 1,700–3,800.
Polyvinyl pyrrolidone, molecular weight 40,000.
Potassium distearyl phosphate.
Potassium pentachlorophenate.
Potassium trichlorophenate.
Rosins and rosin derivatives identified in § 121.2520(c)(5).
Silica.
Sodium alkyl (C_8–C_{18}) benzene-sulfonate.
Sodium dioctyl sulfosuccinate.
Sodium distearyl phosphate.
Sodium lauryl sulfate.
Sodium lignin sulfonate.
Sodium 2-mercaptobenzothiazole.
Sodium naphthalenesulfonic acid (3 mols) condensed with formaldehyde (2 mols).
Sodium orthophenylphenate.
Sodium pentachlorophenate.
Sodium petroleum sulfonate, molecular weight 440–450.
Sodium trichlorophenate.
Stearyl alcohol.
Tributyl phosphate.
Tridecyl alcohol.
Triethanolamine.
Triethylene glycol di(2-ethyl hexanoate).
Tri- (2-ethylhexyl) phosphate.
Tristearyl phosphate.
Wax, petroleum, Type I and Type II.
Wax, petroleum (oxidized).
Wax (montan).

§ 121.2520 Adhesives.

(a) Adhesives may be safely used as components of articles intended for use in packaging, transporting, or holding food in accordance with the following prescribed conditions:

(1) The adhesive is prepared from one or more of the optional substances named in paragraph (c) of this section, subject to any prescribed limitations.

(2) The adhesive is either separated from the food by a functional barrier or used subject to the following additional limitations:

(i) *In dry foods.* The quantity of adhesive that contacts packaged dry food shall not exceed the limits of good manufacturing practice.

(ii) *In fatty and aqueous foods.* (*a*) The quantity of adhesive that contacts packaged fatty and aqueous foods shall not exceed the trace amount at seams and at the edge exposure between packaging laminates that may occur within the limits of good manufacturing practice.

(*b*) Under normal conditions of use the packaging seams or laminates will remain firmly bonded without visible separation.

(b) To assure safe usage of adhesives, the label of the finished adhesive container shall bear the statement "food-packaging adhesive."

(c) Subject to any limitations prescribed in this section and in any other regulation promulgated under section 409 of the act which prescribes safe conditions of use for substances that may be employed as constituents of adhesives, the optional substances used in the formulation of adhesives may include the following:

(1) Substances generally recognized as safe for use in food or food packaging.

(2) Substances permitted for use in adhesives by prior sanction or approval and employed under the specific conditions of use prescribed by such sanction or approval.

(3) Flavoring substances permitted for use in food by regulations in this part, provided that such flavoring substances are volatilized from the adhesives during the packaging fabrication process.

(4) Color additives approved for use in food.

(5) Substances permitted for use in adhesives by other regulations in this subpart and substances named in this subparagraph: *Provided however*, That any substance named in this subparagraph and covered by a specific regulation in this subpart, must meet any specifications in such regulation. Any substance not covered by a specific regulation in this subpart shall meet the specifications, if any, set forth in an order that has been issued extending the effective date of the statute for use of the substance as a component of articles that contact food.

COMPONENTS OF ADHESIVES

Substances	*Limitations*
Abietic acid	
Acetone	
Acetone-urea-formaldehyde resin.	
N-Acetyl ethanolamine	
Acetyl tributyl citrate	
Acetyl triethyl citrate	
Albumin, blood	
1-Alkyl (C_6–C_{18}) amino-3-amino-propane monoacetate.	
Alkylated (C_4 and/or C_8) phenols.	
Alkyl (C_7–C_{12}) benzene	
Alkyl (C_{10}–C_{20}) dimethylbenzyl ammonium chloride.	
Alkyl ketene dimers as described in § 121.2538.	
Alkyl (C_7–C_{12}) naphthalene.	
Aluminum	
Aluminum acetate	
Aluminum di(2-ethylhexoate).	
Aluminum potassium silicate.	
Aminomethylpropanol	
Ammonium benzoate	For use as preservative only.
Ammonium bifluoride	For use only as bonding agent for aluminum foil, stabilizer, or preservative. Total fluoride from all sources not to exceed 1 percent by weight of the finished adhesive.
Ammonium borate	
Ammonium citrate	
Ammonium persulfate	
Ammonium polyacrylate	
Ammonium potassium hydrogen phosphate.	
Ammonium silico-fluoride.	For use only as bonding agent for aluminum foil, stabilizer, or preservative. Total fluoride from all sources not to exceed 1 percent by weight of the finished adhesive.
Ammonium sulfamate	
Ammonium thiocyanate	
Ammonium thiosulfate	
Amyl acetate	
Anhydroenneaheptitol	
Animal glue as described in § 121.2534.	
Antimony oxide	
Asbestos	
Asphalt, paraffinic and naphthenic.	
Azo-*bis*-isobutyronitrile	
Balata rubber	
Barium acetate	
Barium peroxide	
Barium sulfate	
Bentonite	
Benzene (benzol)	
Benzothiazyldisulfide	
p-Benzoxyphenol	For use as preservative only.
Benzoyl peroxide	
Benzyl alcohol	
p-Benzyloxyphenol	For use as preservative only.
BHA (butylated hydroxyanisole).	
BHT (butylated hydroxytoluene).	
Bicyclo[2.2.1]hept-2-ene-6-methyl acrylate.	
2-Biphenyl diphenyl phosphate.	
1,3-Bis(2-benzothiazolylmercaptomethyl) urea.	
2,6-Bis(1-methylheptadecyl)-*p*-cresol.	
Bis(tri-*n*-butyltin) oxide	For use as preservative only.
Borax	
Boric acid	
1,3-Butanediol	
1,4 Butanediol	
1,4-Butanediol modified with adipic acid.	
Butoxy polyethylene polypropylene glycol (molecular weight 900–4,200).	
Butyl acetate	
Butyl acetyl ricinoleate	
Butyl alcohol	
Butylated, styrenated cresols.	
Butyl benzyl phthalate	
4,4'-thiobis-6-*tert*-Butyl-*m*-cresol.	
Butyldecyl phthalate	
1,3-Butylene glycol-diglycolic acid copolymer.	
tert-Butyl hydroperoxide	
4,4'-Butylidenebis(6-*tert*-butyl-*m*-cresol).	
Butyl lactate	
Butyloctyl phthalate	
p-*tert*-Butylphenyl salicylate.	
Butyl phthalate butyl glycolate.	

COMPONENTS OF ADHESIVES—Continued

Substances	*Limitations*
Butyl ricinoleate	
Butyl rubber polymer	
Butyl stearate	
Butyl titanate, polymerized.	
Butyraldehyde	
Calcium ethyl acetoacetate.	
Calcium nitrate	
Calcium metasilicate	
Camphor	
Camphor fatty acid esters.	
Candelilla wax	
Carbon black, channel process.	
Carbon disulfide-1,1′-methylenedipiperidine reaction product.	
Carbon tetrachloride	
Carboxymethylcellulose	
Castor oil, polyoxyethylated (4–84 mols ethylene oxide).	
Cellulose acetate butyrate.	
Cellulose acetate propionate.	
Ceresin wax (ozocerite)	
Cetyl alcohol	
Chloracetamide	
Chloral hydrate	
Chlorinated rubber polymer (natural rubber polymer containing approximately 67 percent chlorine).	
1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride.	For use as preservative only.
Chlorobenzene	
4-Chloro-3,5-dimethylphenol (*p*-chloro-*m*-xylenol).	For use as preservative only.
4-Chloro-3-methylphenol.	Do.
Chloroform	
Chloroprene	
Chromium caseinate	
Chromium nitrate	
Chromium potassium sulfate.	
Cobaltous acetate	
Coconut fatty acid amine salt of tetrachlorophenol.	For use as preservative only.
Copal	
Copper 8-quinolinolate	For use as preservative only.
Coumarone-indene resin	
Cresyl diphenyl phosphate.	
Cumene hydroperoxide	
Cyclohexane	
Cyclohexanol	
Cyclohexanone resin	
Cyclohexanone-formaldehyde condensate.	
N-Cyclohexyl *p*-toluene sulfonamide.	
Damar	
Defoaming agents as described in § 121.2519.	
Dehydroacetic acid	
Diacetone alcohol	
Diacetyl peroxide	
N,N′-Dialkoyl-4,4′-diaminodiphenylmethane mixtures where the alkoyl groups are derived from marine fatty acids (C_{12}-C_{24}).	
2,5-Di-*tert*-amylhydroquinone.	
Diaryl-*p*-phenylenediamine, where the aryl group may be phenyl, tolyl, or xylyl.	
Di(butoxyethyl) phthalate.	
2,5-Di-*tert*-butylhydroquinone.	
Dibutyl maleate	
2,6-Di-*tert*-butyl-4-methylphenol.	For use as preservative only.
Dibutyl phthalate	
Dibutyl sebacate	
Dibutyltin dilaurate for use only as a catalyst for polyurethane resins.	
Dicumyl peroxide	
Dicyandiamide	
Dicyclohexyl phthalate	
Diethanolamine	
Diethanolamine condensed with animal or vegetable fatty acids.	
Diethylene glycol	
Diethylene glyco-adipic acid copolymer.	
Diethylene glycol dibenzoate.	
Diethylene glycol hydrogenated tallowate, monoester.	
Diethylene glycol laurate	
Diethylene glycol monobutyl ether.	
Diethylene glycol monobutyl ether acetate.	
Diethylene glycol monoethyl ether acetate.	
Diethylene glycol monomethyl ether.	
Diethylene glycol monooleate.	
Diethylene glycol monophenyl ether.	
Diethylene glycol copolymer of adipic acid and phthalic anhydride.	
Di(2-ethylhexyl) adipate	
Di(2-ethylhexyl) hexahydrophthalate.	
Di(2-ethylhexyl) phthalate.	
Diethyl oxalate	
Diethyl phthalate	
Dihexyl phthalate	
Dihydroabietyl phthalate.	
1,2-Dihydro-2,2,4-trimethylquinoline, polymerized.	
Di(2-hydroxy-5-*tert*-butylphenyl) sulfide.	
2,2′-Dihydroxy-5,5′-dichlorodiphenylmethane (dichlorophene).	
Diisobutyl adipate	
Diisobutyl ketone	
Diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride.	
Diisobutyl phthalate	
Diisodecyl adipate	
Diisodecyl phthalate	
Diisooctyl phthalate	
Diisopropylbenzene hydroperoxide.	
N,N-Dimethylcyclohexylamine dibutyldithiocarbamate.	
Dimethyl formamide	
Dimethyl hexynol	
Dimethyl octynediol	
Dimethyl phthalate	
3,5-Dimethyl-1,3,5,2*H*-tetrahydrothiadiazine-2-thione.[1]	For use as preservative only.
Di-β-naphthyl-*p*-phenylenediamine.	
4,6-Dinonyl-*o*-cresol	
Dinonylphenol	
Di-*n*-octyldecyl adipate	
Dioctyldiphenylamine	
Dioctylphthalate	
Dioctylsebacate	
Dioxane	
Dipentamethylene-thiuram-tetrasulfide.	
Dipentene	
Dipentene resins	
Diphenyl-2-ethylhexyl phosphate.	
Diphenyl, hydrogenated	
N,N′-Diphenyl-*p*-phenylenediamine.	
Diphenyl phthalate	
1,3-Diphenyl-2-thiourea	
Dipropylene gylcol	
Dipropylene glycol dibenzoate.	
Dipropylene glycol monomethyl ether.	
Dipropylene glycol copolymer of adipic acid and phthalic anhydride.	
Disodium cyanodithioimidocarbonate.	
Distearyl thiodipropionate.	
4,4′-Dithiodimorpholine	
n-Dodecylmercaptan	
tert-Dodecylmercaptan	
Dodecylphenoxybenzenedisulfonic acid and/or its calcium, magnesium, and sodium salts.	
Elemi gum	
Epichlorohydrin-4,4′-isopropylidenediphenol resin.	
Epichlorohydrin-4,4′-*sec*-butylidenediphenol resin.	
Epichlorohydrin-4,4′-isopropylidene-di-*o*-cresol resin.	
Epichlorohydrin-phenol-formaldehyde resin.	
Erucamide (erucylamide).	
Ethanolamine	
Ethoxypropanol butyl ether.	
Ethyl alcohol (ethanol)	
Ethylenediamine	
Ethylenediaminetetraacetic acid, calcium, ferric, potassium, or sodium salts, single or mixed.	
Ethylene dichloride	
Ethylene Glycol	
Ethylene glycol monobutyl ether.	
Ethylene glycol monobutyl ether acetate.	
Ethylene glycol monoethyl ether.	
Ethylene glycol monoethyl ether acetate.	
Ethylene glycol monoethyl ether ricinoleate.	
Ethylene glycol monomethyl ether.	
Ethylene glycol monophenyl ether.	
Ethylene-maleic anhydride copolymer, ammonium or potassium salt.	

COMPONENTS OF ADHESIVES—Continued

Substances	Limitations
Ethylene-methacrylic acid copolymer partial salts: Ammonium, calcium, magnesium, sodium, and/or zinc.	
Ethylene-propylene-dicyclopentadiene copolymer rubber.	
Ethyl-p-hydroxybenzoate.	For use as preservative only.
Ethyl hydroxyethylcellulose.	
Ethyl lactate	
Ethyl phthalyl ethyl glycolate.	
Ethyl-p-toluene sulfonamide.	
Fats and oils derived from animal or vegetable sources, and the hydrogenated, sulfated, or sulfonated forms of such fats and oils.	
Fatty acids derived from animal or vegetable fats and oils; and salts of such acids, single or mixed, as follows:	
Aluminum	
Ammonium	
Calcium	
Magnesium	
Potassium	
Sodium	
Zinc	
Ferric chloride	
Fluosilicic acid (hydrofluosilicic acid).	For use only as bonding agent for aluminum foil, stabilizer, or preservative. Total fluoride from all sources not to exceed 1 percent by weight of the finished adhesive.
Formaldehyde	
Formaldehyde o- and p-toluene sulfonamide.	
Formamide	
Furfural	
Furfuryl alcohol	
Fumaric acid	
Glutaraldehyde	
Glycerides, di- and monoesters.	
Glyceryl borate (glycol boriborate resin).	
Glyceryl ester of damar, copal, elemi, and sandarac.	
Glyceryl monobutyl ricinoleate.	
Glyceryl monohydroxy stearate.	
Glyceryl monohydroxy tallowate	
Glycol diacetate	
Gyloxal	
Heptane	
Hexamethylenetetramine.	
Hexane	
Hexanetriols	
Hexylene glycol	
Hydroabietyl alcohol	
Hydrofluoric acid	For use only as bonding agent for aluminum foil stabilizer, or preservative. Total fluoride from all sources not to exceed 1 percent by weight of the finished adhesive.
Hydrogen peroxide	
Hydroquinone	
Hydroquinone monobenzyl ether.	
Hydroquinone monoethyl ether.	
Hydroxyacetic acid	
7-Hydroxycoumarin	
Hydroxyethylcellulose	
1-(2-Hydroxyethyl)-1-(4-chlorobutyl)-2 alkyl (C_6-C_{17}) imidazolinium chloride.	
β-Hydroxyethyl pyridinium 2-mercaptobenzothiazol.	
Hydroxyethyl starch	
Hydroxyethylurea	
Hydroxylamine sulfate	
Hydroxpropyl methylcellulose.	
Isoascorbic acid	
Isobutyl alcohol (isobutanol).	
Isobutylene-isoprene copolymer.	
Isophorone	
Isopropanolamine (mono-, di-, tri-).	
Isopropyl acetate	
Isopropyl alcohol (isopropanol).	
Isopropyl-m- and p-cresol (thymol derived).	
4,4'-Isopropylidenediphenol, polybutylated mixture.	For use as preservative only.
Isopropyl peroxydicarbonate.	
p-Isopropoxy diphenylamine.	
4,4'-Isopropylidene-bis(p-phenyleneoxy)-di-2-propanol.	
Itaconic acid	
Japan wax	
Kerosene	
Lauroyl peroxide	
Lauroyl sulfate salts:	
Ammonium	
Magnesium	
Potassium	
Sodium	
Lauryl alcohol	
Lauryl pyridinium 5-chloro-2-mercaptobenzothiazole.	
Lignin calcium sulfonate	
Lignin sodium sulfonate	
Linoleamide (linoleic acid amide).	
Magnesium fluoride	For use only as bonding agent for aluminum foil, stabilizer, or preservative. Total fluoride from all sources not to exceed 1 percent by weight of the finished adhesives.
Magnesium glycerophosphate.	
Maleic acid	
Maleic anhydride-diisobutylene copolymer, ammonium or sodium salt.	
Manganese acetate	
Marine oil fatty acid soaps, hydrogenated.	
Melamine	
Melamine-formaldehyde copolymer.	
2-Mercaptobenzothiazole	
2-Mercaptobenzothiazole and dimethyl dithiocarbamic acid mixture, sodium salt.	For use as preservative only.
2-Mercaptobenzothiazole, sodium or zinc salt.	For use as preservative only.
Methacrylate-chromic chloride complex, ethyl or methyl ester.	
p-Menthane hydroperoxide.	
Methyl acetate	
Methyl acetyl ricinoleate	
Methyl alcohol (methanol).	
Methylcellulose	
Methylene chloride	
4,4'-Methylenebis(2,6-di-*tert*-butylphenol).	
2,2-Methylenebis (4-ethyl-6-*tert*-butylphenol).	
2,2-Methylenebis(4-methyl-6-nonylphenol).	
2,2-Methylenebis(4-methyl-6-*tert*-butylphenol).	
Methyl ethyl ketone	
Methyl ethyl ketone-formaldehyde condensate.	
2-Methylhexane	
1-Methyl-2-hydroxy-4-isopropyl benzene.	
Methyl isobutyl ketone	
Methyl oleate	
Methyl oleate-palmitate mixture.	
Methyl phthalyl ethyl glycolate.	
Methyl ricinoleate	
Methyl salicylate	
α-Methylstyrene-vinyl toluene copolymer.	
Methyl tallowate	
Mineral oil	
Monochloracetic acid	
Monooctyldiphenylamine	
Montan wax	
Morpholine	
Myristic acid-chromic chloride complex.	
Myristyl alcohol	
Naphtha	
Naphthalene, monosulfonated.	
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	
α-Naphthylamine	
Nitric acid	
o-Nitrobiphenyl	
Nitrocellulose	
2-Nitropropane	
endo-cis-5-Norbornene-2,3-dicarboxylic anhydride.	
Octyl alcohol	
Octyldecyl phthalate	
Octylphenol	
Octylphenoxyethanols	
Octylphenoxypolyethoxy-polypropoxyethanol (13 mols of ethylene oxide and propylene oxide).	

COMPONENTS OF ADHESIVES—Continued

Substances	*Limitations*
Odorless light petroleum hydrocarbons.	
Oleamide (oleic acid amide).	
Oleic acid, sulfated	
Oxazoline	
n-Oxydiethylene-benzothiazole.	
Palmitamide (palmitic acid amide).	
Paraffin (C_{12}–C_{20}) sulfonate.	
Paraformaldehyde	
Pentachlorophenol	For use as preservative only.
Pentaerythritol ester of maleic anhydride.	
Pentaerythritol monostearate.	
Pentaerythritol tetrastearate.	
2,4-Pentanedione	
Perchloroethylene	
Petrolatum	
Petroleum hydrocarbon resin (cyclopentadiene type), hydrogenated.	
Petroleum hydrocarbon resins (produced by the homo- and copolymerization of dienes and olefins of the aliphatic, alicyclic, and monobenzenoid arylalkene types from distillates of cracked petroleum stocks).	
Phenol	For use as preservative only.
Phenol-coumarone-indene resin.	
Phenolic resins as described in § 121.2514 (b) (3) (vi).	
Phenyl-β-naphthylamine (free of β-naphthylamine).	
o-Phenylphenol	For use as preservative only.
o-Phthalic acid	
Pimaric acid	
Pine oil	
Piperazine	
Piperidinium pentamethylenedithiocarbamate.	
Polyamides derived from dimerized vegetable oil acids and the following amines:	
Diethylenetriamine	
Diphenylamine	
Ethylenediamine	
Tetraethylenepentamine.	
Triethylenetetramine	
Polybutylene glycol (molecular weight 1,000).	
Polyester of diglycolic acid and propylene glycol containing ethylene glycol monobutyl ether as a chain stopper.	
Polyester resins as described under § 121.2514(b) (3) (vii), with the addition of 2,2-dimethyl-1,3-propanediol to the permitted polyhydric alcohols and tetrahydrophthalic acid to the permitted polybasic acids.	
Polyethylene glycol (molecular weight 200–6,000).	
Polyethylene, oxidized	
Polyethylene resins, carboxyl modified, identified in § 121.2580.	
Polyethylenimine	
Polyisoprene	
Polymeric esters of polyhydric alcohols and polycarboxylic acids prepared from glycerin and phthalic anhydride and modified with benzoic acid, castor oil, coconut oil, linseed oil, rosin, soybean oil, styrene, and vinyl toluene.	
Polymers: Homopolymers and copolymers of the following monomers:	
Acrylamide	
Acrylic acid	
Acrylonitrile	
Butadiene	
Butene	
N-tert-Butylacrylamide	
Butyl acrylate	
Butyl methacrylate	
Crotonic acid	
Decyl acrylate	
Diallyl fumarate	
Diallyl maleate	
Diallyl phthalate	
Dibutyl fumarate	
Dibutyl itaconate	
Dibutyl maleate	
Di(2-ethylhexyl) maleate.	
Dioctyl fumarate	
Dioctyl maleate	
Divinylbenzene	
Ethyl acrylate	
Ethylene	
Ethylene cyanohydrin	
2-Ethylhexyl acrylate	
Ethyl methacrylate	
Fumaric acid and/or its methyl, ethyl, propyl, butyl, amyl, hexyl, heptyl and octyl esters.	
Glycidyl methacrylate	
Isobutyl acrylate	
Isobutylene	
Itaconic acid	
Maleic anhydride	
Methacrylic acid	
Methyl acrylate	
N,N'-Methylenebisacrylamide.	
Methyl methacrylate	
N-Methylolacrylamide	
Methyl styrene	
Monoethyl maleate	
Monomethyl maleate	
Mono (2-ethylhexyl) maleate.	
Propyl acrylate	
Propylene	
Styrene	
Triallyl cyanurate	
Vinyl acetate	
Vinyl butyrate	
Vinyl chloride	
Vinyl crotonate	
Vinyl ethyl ether	
Vinyl hexoate	
Vinylidene chloride	
Vinyl methyl ether	
Vinyl pelargonate	
Vinyl propionate	
Vinyl pyrrolidone	
Vinyl stearate	
Polyoxyalkylated-phenolic resin (phenolic resin obtained from formaldehyde plus butyl- and/or amylphenols, oxyalkylated with ethylene oxide and/or propylene oxide).	
Polyoxyethylated (40 mols) tallow alcohol sulfate, sodium salt.	
Polyoxyethylene (molecular weight 200) dibenzoate.	
Polyoxyethylene (molecular weight 1900) di-sec-butylphenylate.	
Polyoxyethylene (molecular weight 200–600) esters of fatty acids derived from animal or vegetable fats and oils (including tall oil).	
Polyoxyethylene (15 mols) ester of rosin.	
Polyoxyethylene (4–5 mols) ether of phenol.	
Polyoxyethylene (25 mols)—glycerol adduct.	
Polyoxyethylene (1–40 mols) nonylphenol.	
Polyoxyethylene (6–7 mols) nonylphenoxy phosphate.	
Polyoxyethylene (1–40 mols) octylphenol.	
Polyoxyethylene (20 mols) oleyl alcohol.	
Polyoxyethylene (20 mols) sorbitan monolaurate.	
Polyoxyethylene (20 mols) sorbitan monooleate.	
Polyoxyethylene (20 mols) sorbitan monopalmitate.	
Polyoxyethylene (20 mols) sorbitan monostearate.	
Polyoxyethylene (40 mols) stearate.	
Polyoxyethylene (5–15 mols) tridecyl alcohol.	
Polyoxypropylene (3 mols) tridecyl alcohol sulfate.	
Polyoxypropylene (20 mols) butyl ether.	
Polyoxypropylene (40 mols) butyl ether.	
Polyoxypropylene (20 mols) oleate butyl ether.	
Polyoxypropylene-polyoxyethylene condensate (molecular weight 1,900–9,000).	
Polypropylene glycol (molecular weight 150–3,000).	
Polypropylene, noncrystalline.	
Polysiloxanes:	
Diethyl polysiloxane	
Dihydrogen polysiloxane.	
Dimethyl polysiloxane	
Diphenyl polysiloxane	
Ethyl hydrogen polysiloxane.	
Ethyl phenyl polysiloxane.	
Methyl ethyl polysiloxane.	
Methyl hydrogen polysiloxane.	

COMPONENTS OF ADHESIVES—Continued

Substances	*Limitations*
Polysiloxanes—Continued	
Methyl phenyl polysiloxane.	
Phenyl hydrogen polysiloxane.	
Polytetrafluoroethylene	
Polyurethane resins produced by reacting diisocyanates with one or more of the polyols or polyesters named in this subparagraph or produced by reacting the chloroformate derivatives of one or more of the polyols or polyesters named in this subparagraph with one or more of the polyamines named in this subparagraph.	
Polyvinyl alcohol	
Polyvinyl butyral	
Polyvinyl formal	
Potassium *N*-methyldithiocarbamate.	
Potassium pentachlorophenate.	For use as preservative only.
Potassium permanganate	
Potassium persulfate	
Potassium phosphates (mono-, di-, tribasic).	
Potassium tripolyphosphate.	
β-Propiolactone	
Propyl alcohol (propanol).	
Propylene carbonate	
Propylene glycol and *p*-*p*′-isopropylidenediphenol diether.	
Propylene glycol esters of coconut fatty acids.	
Propylene glycol monolaurate.	
Propylene glycol monomethyl ether.	
Propylene glycol monostearate.	
Quaternary ammonium chloride (hexadecyl, octadecyl derivative).	For use as preservative only.
Rosin (wood, gum, and tall oil rosin), rosin dimers, decarboxylated rosin (including rosin oil, disproportionated rosin, and these substances as modified by one or more of the following reactants:	
Alkyl (C_1–C_8) phenol-formaldehyde.	
Ammonia	
Ammonium caseinate	
p-Cyclohexylphenol-formaldehyde.	
Diethylene glycol	
Dipentaerythritol	
Ethylene glycol	
Formaldehyde	
Fumaric acid	
Glycerin	
Hydrogen	
Isophthalic acid	
4,4′-Isopropylidenediphenol-epichlorohydrin (epoxy).	
4,4′-Isopropylidenediphenol-formaldehyde.	
Maleic anhyride	
Methyl alcohol	
Pentaerythritol	
Phthalic anhydride	
Polyethylene glycol	
Phenol-formaldehyde	
Phenyl *o*-cresol-formaldehyde.	
Rosin, etc.—Continued	
p-Phenylphenol-formaldehyde.	
Sulfuric acid	
Triethylene glycol	
Xylenol-formaldehyde	
Rosin salts (salts of wood, gum, and tall oil rosin, and the dimers thereof, decarboxylated rosin, disproportionated rosin, hydrogenated rosin):	
Aluminum	
Ammonium	
Calcium	
Magnesium	
Potassium	
Sodium	
Zinc	
Rosin, gasoline-insoluble fraction.	
Rubber hydrochloride polymer.	
Rubber latex, natural	
Salicylic acid	For use as preservative only.
Sandarac	
Sebacic acid	
Shellac	
Sodium alkyl (C_2–$C_{12.5}$ aliphatic) benzenesulfonate.	
Sodium aluminum pyrophosphate.	
Sodium aluminum sulfate.	
Sodium bisulfate	
Sodium calcium silicate	
Sodium capryl polyphosphate.	
Sodium carboxymethylcellulose.	
Sodium chlorate	
Sodium chlorite	
Sodium chromate	
Sodium decylsulfate	
Sodium dehydroacetate	For use as preservative only.
Sodium di-(2-ethylhexoate).	
Sodium di(2-ethylhexyl) pyrophosphate.	
Sodium dihexylsulfosuccinate.	
Sodium diisobutylphenoxydiethoxyethyl sulfonate.	
Sodium diisobutylphenoxymonoethoxyethyl sulfonate.	
Sodium diisopropyl- and triisopropylnaphthalenesulfonate.	
Sodium dimethyldithiocarbamate.	
Sodium dioctylsulfosuccinate.	
Sodium *n*-dodecylpolyethoxy (50 moles) sulfate.	
Sodium ethylene ether of nonylphenol sulfate.	
Sodium 2-ethylhexyl sulfate.	
Sodium fluoride	For use only as bonding agent for aluminum foil, stabilizer, or preservative. Total fluoride for all sources not to exceed 1 percent by weight of the finished adhesive.
Sodium formaldehyde sulfoxylate.	
Sodium formate	
Sodium heptadecylsulfate.	
Sodium hypochlorite	
Sodium isododecylphenoxypolyethoxy (40 moles) sulfate.	
Sodium metaborate	
Sodium α-naphthalene sulfonate.	
Sodium nitrate	
Sodium nitrite	
Sodium oleoyl isopropanolamide sulfosuccinate.	
Sodium pentachlorophenate.	For use as preservative only.
Sodium perborate	
Sodium persulfate	
Sodium *o*-phenylphenate	For use as preservative only.
Sodium polyacrylate	
Sodium polymethacrylate	
Sodium polystyrene sulfonate.	
Sodium salicylate	For use as preservative only.
Sodium tetradecylsulfate	
Sodium thiocyanate	
Sodium bis-tridecylsulfosuccinate.	
Sodium xylene sulfonate	
Sorbitan monooleate	
Sorbitan monopalmitate	
Sorbitan monostearate	
Sorbitan trioleate	
Sorbitan tristearate	
Soybean oil, epoxidized	
Spermaceti wax	
Sperm oil wax	
Starch hydrolysates	
Starch or starch modified by one or more of the treatments described in §§ 121.1031 and 121.2506.	
Starch, reacted with formaldehyde.	
Stearamide (stearic acid amide).	
Stearic acid	
Stearic acid-chromic chloride complex.	
Stearyl-cetyl alcohol, technical grade, approximately 65 percent–80 percent stearyl and 20 percent–35 percent cetyl.	
Strontium salicylate	
Styrenated phenol	
Styrene-maleic anhydride copolymer, ammonium or potassium salt.	
Styrene-maleic anhydride copolymer (partially methylated) sodium salt.	
Styrene-methacrylic acid copolymer, potassium salt.	
Sucrose acetate isobutyrate.	
Sucrose benzoate	
Sucrose octaacetate	
Sulfur	
Tall oil	
Tall oil fatty acids, linoleic and oleic.	
Tall oil fatty acid methyl ester.	
Tall oil, methyl ester	
Tall oil pitch	
Tall oil soaps	
Tallow alcohol (hydrogenated).	

COMPONENTS OF ADHESIVES—Continued

Substances	*Limitations*
Tallow amine, secondary (hexadecyl, octadecyl), of hard tallow.	
Tallow, blown (oxidized)	
Tallow, propylene glycol ester.	
Terpene resins (α- and β-pinene) homopolymers, copolymers, and condensates with phenol, formaldehyde, coumarone, and/or indene.	
Terphenyl	
Terphenyl, hydrogenated	
Terpineol	
Tetraethylene pentamine	
Tetraethylthiuram disulfide.	
Tetrahydrofuran	
Tetrahydrofurfuryl alcohol.	
Tetra-isopropyl titanate	
Tetramethyl decanediol	
Tetramethyl decynediol	
Tetramethyl decynediol plus 1–30 mols of ethylene oxide.	
Tetramethylthiuram monosulfide.	
Tetrasodium *N*-(1,2-dicarboxyethyl)-*N*-octadecylsulfosuccinamate.	
Thiram	
Thymol	For use as preservative only.
Tin oleate for use only as a catalyst for polyurethane resins.	
Tin stearate	
Titanium dioxide	
Titanium dioxide-barium sulfate.	
Titanium dioxide-calcium sulfate.	
Titanium dioxide-magnesium silicate.	
Toluene	
Toluene-2,4-diisocyanate	
Toluene-2,6-diisocyanate	
o-and *p*-Toluene ethyl sulfonamide.	
o-and *p*-Toluene sulfonamide.	
p-Toluene sulfonic acid	
p- (*p'*-Toluene-sulfonylamide)-diphenylamide	
Triazine-formaldehyde resins as described in § 121.2514(b)(3)(xiii).	
Tributyl citrate	
Tri-*tert*-butyl-*p*-phenyl phenol.	For use as preservative only.
Tributyl phosphate	
Tri-*n*-butyltin acetate	For use as preservative only.
Tri-*n*-butyltin neodecanoate.	Do.
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethylene	
Tri-β-chloroethyl phosphate.	
Triethanolamine	
Triethylene glycol	
Triethylene glycol dibenzoate.	
Triethylene glycol di(2-ethylhexoate).	
Thriethylene glycol polyester of benzoic acid and phthalic acid.	
Triethylhexyl phosphate	
Triethylphosphate	
2,4,5-Trihydroxy butyrophenone.	
Triisopropanolamine	
Trimethyl dihydroquinoline, polymerized.	
Trimethylol propane	
2,2,4-Trimethylpentane-diol-1,3-diisobutyrate.	
Trimeric aromatic amine resin from diphenylamine and acetone of molecular weight approximately 500.	
Triphenylphosphate	
Tripropylene glycol monomethyl ether.	
Turpentine	
Urea-formaldehyde resins as described in § 121.2514(b)(3)(xii).	
Vegetable oil, sulfonated or sulfated, potassium salt.	
Vinyl acetate-maleic anhydride copolymer, sodium salt.	
Waxes, petroleum	
Wax, petroleum, chlorinated (40% to 70% chlorine).	
3-(2-Xenolyl)-1,2-epoxypropane.	
Xylene	
Xylene (or toluene) alkylated with dicyclopentadiene.	
Zein	
Zinc acetate	
Zinc ammonium chloride	
Zinc dibenzyl dithiocarbamate.	
Zinc dibutyldithiocarbamate.	
Zinc diethyldithiocarbamate.	
Zinc di(2-ethylhexoate)	
Zinc formaldehyde sulfoxylate.	
Zinc naphthenate and dehydroabietylamine mixture.	
Zinc nitrate	
Zinc orthophosphate	
Zinc resinate	
Zinc sulfide	
Zineb (zinc ethylenebisdithiocarbamate).	
Ziram (zinc dimethyldithiocarbamate).	

§ 121.2521 [Reserved]

§ 121.2522 Polyurethane resins.

The polyurethane resins as defined in this section may be safely used as the food-contact surface of articles intended for packaging, transporting, or holding food subject to the following provisions:

(a) Polyurethane resin is prepared from resin-forming materials described in subparagraph (4) of this paragraph, and from optional substances which may include:

(1) Substances generally recognized as safe in food.

(2) Substances permitted for use in these resins by prior sanction or approval and employed under the specific conditions of such sanction or approval.

(3) Substances that by any regulation promulgated pursuant to section 409 of the act may be safely used as components of resinous and polymeric coatings used as food-contact surfaces.

(4) Substances named in this section and further identified as required.

List of Substances	Limitations
4,4'-Methylenebis (2-chloroaniline).	As a curing agent.
Polyurethane, derived by reaction of toluene diisocyanate and/or diphenylmethane diisocyanate with one or more of the following substances, with or without the catalysts *N,N*-dimethyldodecylamine and *N*-dodecylmorpholine: Adipic acid. 1,4-Butanediol. Ethylene glycol. Polypropylene glycol. Propylene glycol. Trimethylol propane.	
Polyvinyl isobutyl ether	
Polyvinyl methyl ether	
Soya alkyd resin	Conforming in composition with §121.2514 and containing litharge not to exceed that residual from its use as the reaction catalyst and creosole not to exceed that required as an antioxidant.
N,N,N',N'-Tetrakis(2-hydroxypropyl)-ethylenediamine.	As a curing agent.
Triethanolamine	Do.
Copper phthalocyanine	As a pigment.
Ultramarine blue	Do.

(b) The resin is used as the food-contact surface for dry bulk foods.

(c) An appropriate sample of the finished resin in the form in which it contacts food, when subjected to Method 6191 in Federal Test Method Standard No. 141, using No. 50 Emery abrasive in lieu of Ottawa sand, shall exhibit an abrasion coefficient of not less than 20 liters per mil of film thickness.

§ 121.2523 Fluorocarbon resins.

Fluorocarbon resins may be safely used as articles or components of articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, fluorocarbon resins consist of basic resins produced as follows:

(1) Chlorotrifluoroethylene resins produced by the homopolymerization of chlorotrifluoroethylene.

(2) Chlorotrifluoroethylene-1,1-difluoroethylene copolymer resins produced by copolymerization of chlorotrifluoroethylene and 1,1-difluoroethylene.

(3) Chlorotrifluoroethylene-1,1-difluoroethylene-tetrafluoroethylene copolymer resins produced by copolymerization of chlorotrifluorethylene, 1,1-difluoroethylene, and tetrafluoroethylene.

(b) Fluorocarbon resins that are identified in paragraph (a) of this section and that comply with the extractives limitations prescribed in paragraph (c) of this section may be used as articles or components of articles intended for use in contact with food. Fluorocarbon resins that are identified in paragraph (a) of this section and that comply only with the extractives limitations prescribed in paragraph (c) (1) and (2) of this section may be used when such use is limited to articles or components of articles that are intended for repeated use in contact with food or that are intended for one-time use in contact with food only of the types identified in § 121.2526(c), table 1, under types I, II, VI, VII-B, and VIII. In accordance with good manufacturing practice, those food-contact articles intended for repeated use shall be thoroughly cleansed prior to their first use in contact with food.

(c) Extractives limitations are applicable to the basic resins in the form of pellets that have been ground or cut into small particles that will pass through a U.S. Standard Sieve No. 6 and that will be held on a U.S. Standard Sieve No. 10.

(1) A 100-gram sample of the resin pellets, when extracted with 100 milliliters of distilled water at reflux temperature for 8 hours, shall yield total extractives not to exceed 0.003 percent by weight of the resins.

(2) A 100-gram sample of the resin pellets, when extracted with 100 milliliters of 50 percent (by volume) ethyl alcohol in distilled water at reflux temperature for 8 hours, shall yield total extractives not to exceed 0.003 percent by weight of the resins.

(3) A 100-gram sample of the resin pellets, when extracted with 100 milliliters of *n*-heptane at reflux temperature for 8 hours, shall yield total extractives not to exceed 0.01 percent by weight of the resins.

§ 121.2524 Polyethylene terephthalate film.

Polyethylene terephthalate film may be safely used as an article or component of articles used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food subject to the provisions of this section.

(a) Polyethylene terephthalate film consists of a base sheet of ethylene terephthalate polymer, to which have been added optional substances, either as constituents of the base sheet or as constituents of coatings applied to the base sheet.

(b) The quantity of any optional substance employed in the production of polyethylene terephthalate film does not exceed the amount reasonably required to accomplish the intended physical or technical effect or any limitation further provided.

(c) Any substance employed in the production of polyethylene terephthalate film that is the subject of a regulation in Subpart F of this part conforms with any specification in such regulation, and any substance which is not the subject of a regulation in Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Substances employed in the production of polyethylene terephthalate film include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction or approval for use in polyethylene terephthalate film and used in accordance with such sanction or approval.

(3) Substances which by regulation in this Subpart F may be safely used as components of resinous or polymeric coatings and film used as food-contact surfaces subject to the provisions of such regulation.

(4) Substances identified in this subparagraph and subject to such limitations as are provided:

List of substances and limitations

(i) Base sheet:
  Ethylene terephthalate copolymers: Prepared by the copolymerization of dimethyl terephthalate or terephthalic acid with ethylene glycol, modified with one or more of the following: Azelaic acid, dimethyl azelate, dimethyl sebacate, sebacic acid.
  Ethylene terephthalate polymer: Prepared by the condensation of dimethyl terephthalate and ethylene glycol.
  Ethylene terephthalate polymer: Prepared by the copolymerization of terephthalic acid and ethylene glycol.
(ii) Coatings:
  2-Ethylhexyl acrylate copolymerized with one or more of the following:
    Acrylonitrile.
    Methacrylonitrile.
    Methyl acrylate.
    Methyl methacrylate.
    Itaconic acid.
  Vinylidene chloride copolymerized with one or more of the following:
    Methacrylic acid and its methyl, ethyl, propyl, butyl, or octyl esters.
    Acrylic acid and its methyl, ethyl, propyl, butyl, or octyl esters.
    Acrylonitrile.
    Methacrylonitrile.
    Vinyl chloride.
    Itaconic acid.
(iii) Emulsifiers:
  Sodium dodecylbenzenesulfonate: As an adjuvant in the application of coatings to the base sheet.
  Sodium lauryl sulfate: As an adjuvant in the application of coatings to the base sheet.

(e) Polyethylene terephthalate film conforming with the specifications prescribed in subparagraph (1) of this paragraph is used as provided in subparagraph (2) of this paragraph:

(1) *Specifications.* (i) The film, when exposed to distilled water at 250° F. for 2 hours, yields chloroform-soluble extractives not to exceed 0.5 milligram per square inch of film surface exposed to the solvent; and

(ii) The film, when exposed to *n*-heptane at 150° F. for 2 hours, yields chloroform-soluble extractives not to exceed 0.5 milligram per square inch of film surface exposed to the solvent.

(2) *Conditions of use.* The film is used for packaging, transporting, or holding food, excluding alcoholic beverages, at temperatures not to exceed 250° F.

(f) Polyethylene terephthalate film conforming with the specifications prescribed in subparagraph (1) of this paragraph is used as provided in subparagraph (2).

(1) *Specifications.* (i) The film meets the specifications in paragraph (e)(1) of this section; and

(ii) The film, when exposed to 50 percent ethyl alcohol at 120° F. for 24 hours, yields chloroform-soluble extractives not to exceed 0.5 milligram per square inch of film surface exposed to the solvent.

(2) *Conditions of use.* The film is used for packaging, transporting, or holding alcoholic beverages that do not exceed 50 percent alcohol by volume.

(g) Uncoated polyethylene terephthalate film consisting of a base sheet prepared from substances identified in paragraph (d)(4)(i) of this section and conforming with the specifications prescribed in subparagraph (1) of this paragraph is used as provided in subparagraph (2) of this paragraph:

(1) *Specifications.* (i) The film, when exposed to distilled water at 250° F. for 2 hours, yields chloroform-soluble extractives not to exceed 0.02 milligram per square inch of film surface exposed to the solvent; and

(ii) The film, when exposed to *n*-heptane at 150° F. for 2 hours, yields chloroform-soluble extractives not to exceed 0.02 milligram per square inch of film surface exposed to the solvent.

(2) *Conditions of use.* The film is used to contain foods during oven baking or oven cooking at temperatures above 250° F.

§ 121.2525 Acrylate ester copolymer coating.

Acrylate ester copolymer coating may safely be used as a food-contact surface of articles intended for packaging and holding food, including heating of prepared food, subject to the provisions of this section:

(a) The acrylate ester copolymer is a fully polymerized copolymer of ethyl acrylate, methyl methacrylate, and methacrylic acid applied in emulsion form to molded virgin fiber and heat-cured to an insoluble resin.

(b) Optional substances used in the preparation of the polymer and in the preparation and application of the emulsion may include substances named in this paragraph, in an amount not to exceed that required to accomplish the desired technical effect and subject to any limitation prescribed: *Provided, however*, That any substance named in this paragraph and covered by a specific regulation in Subpart F of this chapter must meet any specifications in such regulation. Any substance not covered by a specific regulation in Subpart F shall meet any specifications set forth in an order that has been issued extending the effective date of the statute for the use of the substance as a component of articles that contact food.

List of substances	Limitations
Aluminum stearate	
Ammonium lauryl sulfate	
Borax	Not to exceed the amount required as a preservative in emulsion defoamer.
Disodium hydrogen phosphate.	
Formaldehyde	Do.
Glyceryl monostearate	
Methyl cellulose	
Mineral oil	
Paraffin wax	
Potassium hydroxide	
Potassium persulfate	
Sorbitan monolaurate	
Tallow	
Tetrasodium pyrophosphate	
Titanium dioxide	

(c) The coating in the form in which it contacts food meets the following tests:

(1) An appropriate sample when exposed to distilled water at 212° F. for 30 minutes shall yield total chloroform-soluble extractables not to exceed 0.5 milligram per square inch.

(2) An appropriate sample when exposed to n-heptane at 120° F. for 30 minutes shall yield total chloroform-soluble extractables not to exceed 0.5 milligram per square inch.

§ 121.2526 Components of paper and paperboard in contact with aqueous and fatty foods.

Substances identified in this section may be safely used as components of the uncoated or coated food-contact surface of paper and paperboard intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding aqueous and fatty foods, subject to the provisions of this section. Components of paper and paperboard in contact with dry food of the type identified under type VIII of table 1 in paragraph (c) of this section are subject to the provisions of § 121.2571.

(a) Substances identified in subparagraphs (1) through (5) of this paragraph may be used as components of the food-contact surface of paper and paperboard. Paper and paperboard products shall be exempted from compliance with the extractives limitations prescribed in paragraph (c) of this section: *Provided*, That the components of the food-contact surface consist entirely of one or more of the substances identified in this paragraph: *And provided further*, That if the paper or paperboard when extracted under the conditions prescribed in paragraph (c) of this section exceeds the limitations on extractives contained in paragraph (c) of this section, information shall be available from manufacturing records from which it is possible to determine that only substances identified in this paragraph (a) are present in the food-contact surface of such paper or paperboard.

(1) Substances generally recognized as safe in food.

(2) Substances generally recognized as safe for their intended use in paper and paperboard products used in food packaging.

(3) Substances used in accordance with a prior sanction or approval.

(4) Substances that by regulation in this Part 121 may be safely used without extractives limitations as components of the uncoated or coated food-contact surface of paper and paperboard in contact with aqueous or fatty food, subject to the provisions of such regulation.

(5) Substances identified in this subparagraph, as follows:

List of substances	Limitations
Acetyl peroxide	For use only as polymerization catalyst.
Acrylamide-β-methacrylyloxyethyl-trimethylammonium methyl sulfate copolymer resins containing not more than 5 molar percent of β-methacrylyloxyethyltrimethylammonium methyl sulfate and containing less than 0.2% of residual acrylamide monomer.	For use only as a retention aid and flocculant employed prior to the sheet-forming operation in the manufacture of paper and paperboard.
tert-Alkyl(C_8-C_{18})mercaptans	For use only as polymerization-control agent.
Aluminum acetate	
Ammonium persulfate	
Ammonium thiosulfate	
Azo-bis-isobutyronitrile	For use only as polymerization catalyst.
Benzoyl peroxide	Do.
N,*N*-Bis(2-hydroxyethyl)alkyl (C_{12}-C_{18})amide.	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
tert-Butyl hydroperoxide	For use only as polymerization catalyst.
tert-Butyl peroxide	Do.
Carrageenan and salts of carrageenan as described in §§ 121.1066 and 121.1067.	
Castor oil, hydrogenated	
Castor oil, sulfated, ammonium, potassium, or sodium salt.	
Cellulose, regenerated	
Chloracetamide	For use only as polymerization-control agent.
Cobaltous acetate	For use only as polymerization catalyst.
Cumene hydroperoxide	Do.
Cyanoguanidine	For use only: 1. As a modifier for amino resins. 2. As a fluidizing agent in starch and protein coatings for paper paper and paperboard.
Dialdehyde guar gum	For use only as a wet-strength agent employed prior to the sheet-forming operation in the manufacture of paper and paperboard and used at a level not to exceed 1% by weight of the finished dry paper and paperboard fibers.
Dialdehyde locust bean gum	Do.
2,5-Di-*tert*-butyl hydroquinone	For use only as an antioxidant for fatty based coating adjuvants provided it is used at a level not to exceed 0.005% by weight of coating solids.
Diethanolamine	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
Diethylenetriamine	For use only as a modifier for amino resins.
1,2-Dihydro-2,2,4-trimethylquinoline, polymerized.	For use only as an antioxidant for natural rubber latex coatings provided it is used at a level not to exceed 0.1% by weight of the coating solids.
N,*N*-Diisopropanolamide of tallow fatty acids.	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
N,*N'*-Dioleoylethylenediamine	
Diphenylamine	For use only as an antioxidant for fatty based coating adjuvants provided it is used at a level not to exceed 0.005% by weight of coating solids.
Dipropylene glycol	
N,*N'*-Distearoylethylenediamine.	
Fatty acids derived from animal and vegetable fats and oils and salts of such acids, single or mixed, as follows: Aluminum. Ammonium. Calcium. Magnesium. Potassium. Sodium. Zinc.	
Ferric chloride	
Ferrous ammonium sulfate	
Fish oil, hydrogenated	
Fish oil, hydrogenated, potassium salt.	
Furcelleran and salts of furcelleran as described in §§ 121.1068 and 121.1069.	
Glyceryl lactostearate	
Glyceryl mono-12-hydroxystearate.	
Glyceryl monoricinoleate	
Hexamethylenetetramine	For use only as polymerization cross-linking agent for protein, including casein.
Hydroquinone and the monomethyl or monoethyl ethers of hydroquinone.	For use only as an inhibitor for monomers.
Isopropyl *m*- and *p*-cresols (thymol derived).	For use only as an antioxidant for fatty based coating adjuvants provided it is used at a level not to exceed 0.005% by weight of coating solids.
Isopropyl peroxydicarbonate	For use only as polymerization catalyst.
Japan wax	
Lanolin	
Lauryl peroxide	For use only as polymerization catalyst.
Lauryl sulfate salts: Amonium. Magnesium. Potassium. Sodium.	
Lecithin, hydroxylated	
Lignin sulfonate and its calcium, potassium, and sodium salts.	
Methyl naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
Mineral oil, white	
Monoglyceride citrate	
Mustardseed oil, sulfated, ammonium, potassium, or sodium salt.	
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
Nitrocellulose, 10.9-12.2% nitrogen.	
Oleic acid, sulfated, ammonium, potassium, or sodium salt.	
N-Oleoyl-*N'*-stearoylethylenediamine.	
Oxystearin	
Paraformaldehyde	For use only as setting agent for protein.
Petrolatum	Complying with § 121.2588.

List of substances	Limitations
Petroleum asphalt, steam and vacuum refined to meet the following specifications: Softening point 190° F.—200° F., as determined by ASTM Method D-36; penetration at 77° F. not to exceed 0.3 mm., as determined by ASTM Method D-5; and maximum weight loss not to exceed 3% when distilled to 700° F., nor to exceed an additional 1.1% when further distilled between 700° F. and thermal decomposition.	For use only as a component of internal sizing of paper and paperboard intended for use in contact only with raw fruits, raw vegetables, and dry food of the type identified under type VIII of table 1 in paragraph (c) of this section, and provided that the asphalt is used at a level not to exceed 5% by weight of the finished dry paper and paperboard fibers.
Phenothiazine	For use only as antioxidant in dry rosin size.
Phenyl acid phosphate	For use only as polymerization catalyst in melamine-formaldehyde modified alkyd coatings and limited to use at a level not to exceed 2% by weight of the coating solids.
Phenyl-β-naphthylamine	For use only as antioxidant in dry rosin size and limited to use at a level not to exceed 0.4% by weight of the dry rosin size.
Polyethylene, air oxidized (minimum molecular weight 1200).	For use only as component of coatings that contact food only of the type identified under types VII-B and VIII of table 1 in paragraph (c) of this section, and limited to use at a level not to exceed 50% by weight of the coating solids.
Polyethylene glycol (molecular weight greater than 300).	
Polyethylene glycol (200) dilaurate.	For use only as an adjuvant em- adjuvant employed in the manufacture of paper and paperboard prior to the sheet-forming operation.
Polyethylene glycol (400) dioleate.	
Polyethylene glycol (400) esters of coconut oil fatty acids.	
Polyethylene glycol (600) esters of tall oil fatty acids.	
Polyethylene glycol (400) monolaurate.	
Polyethylene glycol (600) monolaurate.	
Polyethylene glycol (400) monooleate.	
Polyethylene glycol (600) monooleate.	
Polyethylene glycol (400) monostearate.	
Polyethylene glycol (600) monostearate.	
Polyethylene glycol (3,000) monostearate.	
Polyethylenimine, produced by the polymerization of ethylenimine.	For use only as an adjuvant employed prior to sheet formation in paper-making systems operated at a pH of 4.5 or higher, and limited to use at a level not to exceed 5% by weight of finished dry paper or paperboard fibers.
Polyoxyethylene (20) sorbitan monolaurate.	
Polyoxyethylene (20) sorbitan tristearate.	
Polypropylene glycol (minimum molecular weight 1,000).	
Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).	Conforming to the identity prescribed in § 121.1030.
Polysorbate 80	Conforming to the identity prescribed in § 121.1009.
Potassium persulfate	
Propylene glycol alginate	
Protein hydrolysate from animal hides or soybean protein condensed with oleic and/or stearic acid.	
Rapeseed oil, sulfated ammonium, potassium, or sodium salt.	
Ricebran oil, sulfated ammonium, potassium, or sodium salt.	
Rosin and rosin derivatives	As provided in § 121.2592.
Sodium dioctyl sulfosuccinate	
Sodium formaldehyde sulfoxylate.	For use only as polymerization catalyst.
Sodium hypochlorite	
Sodium *N*-methyl-*N*-oleyltaurate.	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
Sodium nitrite	For use only: 1. At levels not to exceed 0.2% by weight of lubricants or release agents applied at levels not to exceed 1 lb. per ton of finished paper or paperboard. 2. As an anticorrosion agent at levels not to exceed 0.2% by weight of wax emulsions used as internal sizing in the manufacture of paper and paperboard prior to the sheet-forming operation.
Sodium persulfate	
Sodium polyacrylate	For use as a thickening agent for natural rubber latex coatings, provided it is used at a level not to exceed 2% by weight of coating solids.
Sorbitan monostearate	
Sorbitan trioleate	
Sperm oil, sulfated, ammonium, potassium, or sodium salt.	
Stearyl-2-lactylic acid and its calcium salt.	
Styrene-maleic anhydride copolymer, sodium salt (minimum molecular weight 30,000).	For use only: 1. As a coating thickening agent at a level not to exceed 1% by weight of coating solids. 2. As surface size at a level not to exceed 1% by weight of paper or paperboard substrate.
Styrene-methacrylic acid copolymer, potassium salt (minimum molecular weight 30,000).	For use only as a coating thickening agent at a level not to exceed 1% by weight of coating solids.
Tallow	
Tallow alcohol	
Tallow alcohol, hydrogenated	
Tallow fatty acid, hydrogenated	
Tallow hydrogenated	
Tallow sulfated, ammonium, potassium, or sodium salt.	
Tetraethylenepentamine	For use only as a modifier for amino resins.
Tin oleate	
Triethanolamine	For use only to adjust pH during the manufacture of amino resins permitted for use as components of paper and paperboard.
Triethylene glycol adipic acid monoester produced by reacting equimolar quantities of triethylene glycol and adipic acid.	For use only as a curl-control agent at a level not to exceed 2% by weight of coated or uncoated paper and paperboard.
Triethylenetetramine	For use only as a modifier for amino resins.
Viscose rayon fibers	
Wax, petroleum	Complying with § 121.2586.
Xylene sulfonic acid-formaldehyde condensate, sodium salt.	For use only as an adjuvant to control pulp absorbency and pitch content in the manufacture of paper and paperboard prior to the sheet-forming operation.
Zinc formaldehyde sulfoxylate	For use only as polymerization catalyst.
Zinc octoate	
Zirconium oxide	For use only as a component of waterproof coatings where the zirconium oxide is present at a level not to exceed 1 percent by weight of the dry paper or paperboard fiber and where the zirconium oxide is produced by hydrolysis of zirconium acetate.

(b) Substances identified in subparagraphs (1) and (2) of this paragraph may be used as components of the food-contact surface of paper and paperboard, provided that the food-contact surface of the paper or paperboard complies with the extractives limitations prescribed in paragraph (c) of this section.

(1) Substances identified in § 121.2514 (b)(3) with the exception of those identified in paragraph (b)(3) (v), (xv), (xx), (xxxi), and (xxxii) of that section and paragraph (a) of this section.

(2) Substances identified in this subparagraph follows:

List of substances	Limitations
Acrylamide copolymerized with ethyl acrylate and/or stryene and/or methacrylic acid, subsequently reacted with formaldehyde and butyl alcohol.	

List of substances	Limitations
Acrylic copolymers produced by copolymerizing 2 or more of the acrylate monomers butyl acrylate, ethyl acrylate, ethyl methacrylate, methyl acrylate, methyl methacrylate, and n-propyl methacrylate, or produced by copolymerizing one or more of such acrylate monomers together with one or more of the monomers acrylic acid, acrylonitrile, butadiene, 2-ethyl-hexyl acrylate, fumaric acid, glycidyl methacrylate, n-hexyl-methacrylate, itaconic acid, methacrylic acid, styrene, vinyl acetate, vinyl chloride, and vinylidene chloride. The finished copolymers shall contain at least 50 weight percent of polymer units derived from one or more of the monomers butyl acrylate, ethyl acrylate, ethyl methacrylate, methyl acrylate, methyl methacrylate, and n-propyl methacrylate; and shall contain no more than 5 weight percent of total polymer units derived from acrylic acid, fumaric acid, glycidyl methacrylate, n-hexyl methacrylate, itaconic acid, and methacrylic acid. The provision limiting the finished acrylic copolymers to not more than 5 weight percent of total polymer units derived from acrylic acid, fumaric acid, glycidyl methacrylate, n-hexyl methacrylate, itaconic acid, and methacrylic acid is not applicable to finished acrylic copolymers used as coating adjuvants at a level not exceeding 2 weight percent of total coating solids.	
Butyl benzyl phthalate	Complying with § 121.2511.
Butyl oleate, sulfated, ammonium, potassium, or sodium salt.	
Butyraldehyde	
Captan (N-trichloromethylmercapto-4-cyclohexene-1, 2-dicarboximide).	For use only as a mold- and mildew-proofing agent in coatings intended for use in contact with food only of the types identified in paragraph (c) of this section, table 1, under type I, II, VI-B, and VIII.
Copper 8-quinolinolate	For use only as preservative for coating formulations.
Cyclised rubber produced when natural pale crepe rubber dissolved in phenol is catalytically cyclised so that the finished cyclised rubber has a melting point of 293° F.-311° F. as determined by ASTM Method E-28-58T and contains no more than 400 p.p.m. of residual-free phenol.	For use only in coatings for paper and paperboard intended for use in contact with food only of the types identified in paragraph (c) of this section, table 1, under types VIII and IX.
Dibutyl phthalate	
Dibutyl sebacate	
Dicyclohexyl phthalate	
Diethylene glycol ester of the adduct of terpene and maleic anhydride.	
Dihydroxy dichlorodiphenyl methane.	For use only as preservative for coating formulations.
Dimethylpolysiloxane, 100 centistokes viscosity.	
Dimethylpolysiloxane-betaphenylethyl methyl polysiloxane copolymer (2:1), 200 to 400 centistokes viscosity.	
EDTA (ethylenediaminetetraacetic acid) and its sodium and/or calcium salts.	
Formaldehyde	For use only as preservative for coating formulations.
Glyceryl monobutyl ricinoleate	
Isobutyl oleate, sulfated, ammonium, potassium, or sodium salt.	
Maleic anhydride adduct of butadiene-styrene copolymer.	
α-Methylstyrene-vinyltoluene copolymer resins.	
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	
Oleyl alcohol	
Pentaerythritol tetrastearate	
Polyester resin formed by the reaction of the methyl ester of rosin, phthalic anhydride, maleic anhydride and ethylene glycol, such that the polyester resin has an acid number of 4 to 11, a drop-softening point of 70° C.-92° C., and a color of K or paler.	
Polyester resin produced by reacting the acid groups in montan wax with ethylene glycol.	
Polyoxyethylated (40 moles) tallow alcohol sulfate, sodium salt.	Not to exceed 300 p.p.m. in finished coated paper or paperboard.
Polyoxypropylene-polyoxyethylene block polymers (minimum molecular weight 6,800).	
Polyvinyl acetate	
Polyvinyl alcohol (minimum viscosity of 4% aqueous solution at 20° C. of 4 centipoises).	
Polyvinyl butyral	
Polyvinyl formal	
Polyvinylidene chloride	
Polyvinyl pyrrolidone	
Polyvinyl stearate	
Propylene glycol mono- and diesters of fats and fatty acids.	
Sodium decylbenzenesulfonate	
Sodium dihexyl sulfosuccinate	
Sodium 2-ethylhexyl sulfate	
Sodium oleyl isopropanolamide sulfosuccinate.	
Sodium pentachlorophenate	For use only as preservative for coating formulations.
Sodium o-phenylphenate	Do.
Sodium vinyl sulfonate, polymerized.	
Styrene copolymers produced by copolymerizing styrene with maleic anhydride and its methyl and sec-butyl esters. Such copolymers may contain β-nitrostyrene as a polymerization chain terminator.	For use only as a coating or component of coatings and limited to use at a level not to exceed 1% by weight of paper or paperboard substrate.
Styrene-butadiene copolymers containing not more than 10 weight percent of polymer units derived by copolymerization with one or more of the following monomers: Acrylic acid. Fumaric acid. 2-Hydroxyethyl acrylate Itaconic acid. Methacrylic acid.	For use in coatings intended for use in contact with food only of the types identified in paragraph (c) of this section, table 1, under types VII, VIII, and IX.
Styrene-maleic anhydride copolymers.	For use only as a coating or component of coatings and limited for use at a level not to exceed 2 percent by weight of paper or paperboard substrate.
Styrene-methacrylic acid copolymers containing no more than 5 weight percent of polymer units derived from methacrylic acid.	
Toluenesulfonamide-formaldehyde resins.	
Vinyl acetate copolymers produced by copolymerizing vinyl acetate with one or more of the monomers acrylamide, acrylic acid, acrylonitrile, bicyclo-[2.2.1]*hept*-2-ene-6-methylacrylate, butyl acrylate, crotonic acid, decyl acrylate, diallyl fumarate, diallyl maleate, diallyl phthalate, dibutyl fumarate, dibutyl itaconate, dibutyl maleate, di(2-ethylhexyl) maleate, divinyl benzene, ethyl acrylate, 2-ethylhexyl acrylate, fumaric acid, itaconic acid, maleic acid, methacrylic acid, methyl acrylate, methyl methacrylate, mono(2-ethylhexyl) maleate, monoethyl maleate, styrene, vinyl butyrate, vinyl crotonate, vinyl hexoate, vinylidene chloride, vinyl pelargonate, vinyl propionate, vinyl pyrrolidone, vinyl stearate, and vinyl sulfonic acid. The finished copolymers shall contain at least 50 weight percent of polymer units derived from vinyl acetate and shall contain no more than 5 weight percent of total polymer units derived from acrylamide, acrylic acid, crotonic acid, decyl acrylate, dibutyl itaconate, di(2-ethylhexyl) maleate, fumaric acid, itaconic acid, maleic acid, methacrylic acid, mono(2-ethylhexyl) maleate, monoethyl maleate, vinyl butyrate, vinyl hexoate, vinyl pelargonate, vinyl propionate, vinyl stearate, and vinyl sulfonic acid.	
Vinyl chloride copolymers produced by copolymerizing vinyl chloride with one or more of the monomers acrylonitrile; fumaric acid and its methyl, ethyl, propyl, butyl, amyl, hexyl, heptyl, or octyl esters; maleic acid and its methyl, ethyl, propyl, butyl, amyl, hexyl, heptyl, or octyl esters; maleic anhydride; vinyl acetate; and vinylidene chloride. The finished copolymers shall contain at least 50 weight percent of polymer units derived from vinyl chloride and shall contain no more than 5 weight percent of total polymer units derived from fumaric and/or maleic acid and/or their methyl, ethyl, propyl, butyl, amyl, heptyl, or octyl monoesters or from maleic anhydride.	
Vinyl chloride-vinyl acetate hydroxyl-modified copolymers.	
Vinyl chloride-vinyl acetate hydroxyl-modified copolymers reacted with trimellitic anhydride.	
Vinylidene chloride copolymers produced by copolymerizing vinylidene chloride with one or more of the monomers acrylamide, acrylic acid, acrylonitrile, butyl acrylate, butyl methacrylate, ethyl acrylate, ethyl methacrylate, fumaric acid, itaconic acid, methacrylic acid, methyl acrylate, methyl methacrylate, octadecyl methacrylate, propyl acrylate, propyl methacrylate, vinyl chloride, and vinyl sulfonic acid. The finished copolymers shall contain at least 50 weight percent of polymer units derived from vinylidene chloride; and shall contain no more than 5 weight percent of total polymer units derived from acrylamide, acrylic acid, fumaric acid, itaconic acid, methacrylic acid, octadecyl methacrylate, and vinyl sulfonic acid.	

(c) The food-contact surface of the paper and paperboard in the finished form in which it is to contact food, when extracted with the solvent or solvents characterizing the type of food, and under conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of this paragraph, shall yield net chloroform-soluble extractives (corrected for wax, petrolatum, mineral oil, and zinc extractives as zinc oleate) not to exceed 0.5 milligram per square inch of food-contact surface as determined by the methods described in paragraph (d) of this section.

TABLE 1—TYPES OF RAW AND PROCESSED FOODS

I. Nonacid, aqueous products; may contain salt or sugar or both (pH above 5.0).

TABLE 1—TYPES OF RAW AND PROCESSED FOODS—Continued

II. Acid, aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
III. Aqueous, acid or nonacid products containing free oil or fat; may contain salt, and including water-in-oil emulsions of low- or high-fat content.
IV. Dairy products and modifications:
  A. Water-in-oil emulsions, high- or low-fat.
  B. Oil-in-water emulsions, high- or low-fat.
V. Low-moisture fats and oils.
VI. Beverages:
  A. Containing up to 8 percent of alcohol.
  B. Nonalcoholic.
  C. Containing more than 8 percent of alcohol.
VII. Bakery products other than those included under types VIII or IX of this table:
  A. Moist bakery products with surface containing free fat or oil.
  B. Moist bakery products with surface containing no free fat or oil.
VIII. Dry solids with the surface containing no free fat or oil (no end test required).
IX. Dry solids with the surface containing free fat or oil.

TABLE 2—TEST PROCEDURES WITH TIME TEMPERATURE CONDITIONS FOR DETERMINING AMOUNT OF EXTRACTIVES FROM THE FOOD-CONTACT SURFACE OF UNCOATED OR COATED PAPER AND PAPERBOARD, USING SOLVENTS SIMULATING TYPES OF FOODS AND BEVERAGES

Condition of use	Types of food (see table 1)	Food-simulating solvents			
		Water	Heptane[1]	8 percent alcohol	50 percent alcohol
		Time and temperature	*Time and temperature*	*Time and temperature*	*Time and temperature*
A. High temperature heat-sterilized (e.g., over 212° F.).	I, IV-B, VII-B	250° F., 2 hr.			
	III, IV-A, VII-A	250° F., 2 hr.	150° F., 2 hr.		
B. Boiling water sterilized	II, VII-B	212° F., 30 min.			
	III, VII-A	212° F., 30 min.	120° F., 30 min.		
C. Hot filled or pasteurized above 150° F.	II, IV-B	Fill boiling, cool to 100° F.			
	III, IV-A	Fill boiling, cool to 100° F.	120° F., 15 min.		
	V		120° F., 15 min.		
D. Hot filled or pasteurized below 150° F.	II, IV-B, VI-B	150° F., 2 hr.			
	III, IV-A	150° F., 2 hr.	100° F., 30 min.		
	V		100° F., 30 min.		
	VI-A			150° F., 2 hr.	
	VI-C				150° F., 2 hr.
E. Room temperature filled and stored (no thermal treatment in the container).	I, II, IV-B, VI-B, VII-B.	120° F., 24 hr.			
	III, IV-A, VII-A	120° F., 24 hr.	70° F., 30 min.		
	V, IX		70° F., 30 min.		
	VI-A			120° F., 24 hr.	
	VI-C				120° F., 24 hr.
F. Refrigerated storage (no thermal treatment in the container).	III, IV-A, VII-A	70° F., 48 hr.	70° F., 30 min.		
	I, II, IV-B, VI-B, VII-B.	70° F., 48 hr.			
	VI-A			70° F., 48 hr.	
	VI-C				70° F., 48 hr.
G. Frozen storage (no thermal treatment in the container).	I, II, IV-B, VII-B.	70° F., 24 hr.			
	III, VII-A	70° F., 24 hr.	70° F., 30 min.		
H. Frozen or refrigerated storage: Ready-prepared foods intended to be reheated in container at time of use:					
1. Aqueous or oil-in-water emulsion of high- or low-fat.	I, II, IV-B, VII-B.	212° F., 30 min.			
2. Aqueous, high- or low-free oil or fat.	III, IV-A, VII-A	212° F., 30 min.	120° F., 30 min.		

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[1] Heptane extractability results must be divided by a factor of 5 in arriving at the extractability for a food product having water-in-oil emulsions or free oil or fat.

(d) *Analytical methods*—(1) *Selection of extractability conditions.* First ascertain the type of food product (table 1, paragraph (c) of this section) that is being packed commercially in the paper or paperboard and the normal conditions of thermal treatment used in packaging the type of food involved. Using table 2, paragraph (c) of this section, select the food-simulating solvent or solvents and the time-temperature exaggerations of the paper or paperboard use conditions. Having selected the appropriate food-simulating solvent or solvents and the time-temperature exaggeration over normal use, follow the applicable extraction procedure.

(2) *Reagents*—(i) *Water.* All water used in extraction procedures should be freshly demineralized (deionized) distilled water.

(ii) *n-Heptane.* Reagent grade, freshly redistilled before use, using only material boiling at 208° F.

(iii) *Alcohol.* 8 or 50 percent (by volume), prepared from undenatured 95 percent ethyl alcohol diluted with demineralized (deionized) distilled water.

(iv) *Chloroform.* Reagent grade, freshly redistilled before use, or a grade having an established consistently low blank.

(3) *Selection of test method.* Paper or paperboard ready for use in packaging shall be tested by use of the extraction cell described in the Journal of the Association of Official Agricultural Chemists, Volume 47, No. 1, pages 177–179 (February 1964), also described in ASTM Method F 34-63T, except that formed paper and paperboard products may be tested in the container by adapting the in-container methods described in § 121.2514(e). Formed paper and paperboard products, such as containers and lids, that cannot be tested satisfactorily by any of the above methods may be tested in specially designed extraction equipment, usually consisting of clamping devices that fit the closure or container so that the food-contact surface can be tested, or, if flat samples can be cut from the formed paper or paperboard products without destroying the integrity of the food-contact surface, they may be tested by adapting the following "sandwich" method:

(i) *Apparatus.* (*a*) Thermostated (±1.0° F.) water bath, variable between 70° F. and 120° F. Water bath cover capable of holding at least one 800-milliliter beaker partially submersed in bath.

(*b*) Analytical balance sensitive to 0.1 milligram with an approximate capacity of 100 grams.

(*c*) Tongs.

(*d*) Hood and hot-plate facilities.

(*e*) Forced draft oven.

For each extraction, the following additional apparatus is necessary:

(*f*) One No. 2 paper clip.

(*g*) One 800-milliliter beaker with watch-glass cover.

(*h*) One 250-milliliter beaker.

(*i*) Five 2½-inch-square aluminum screens (standard aluminum window screening is acceptable).

(*j*) One wire capable of supporting sample stack.

(ii) *Procedure.* (*a*) For each extraction, accurately cut eight 2½-inch-square samples from the formed paper or paperboard product to be tested.

(*b*) Carefully stack the eight 2½-inch-square samples and the five 2½-inch-square aluminum screens in sandwich form such that the food-contact side of each sample is always next to an aluminum screen, as follows: Screen, sample, sample, screen, sample, sample screen, etc. Clip the sandwich together carefully with a No. 2 paper clip, leaving just enough space at the top to slip a wire through.

(*c*) Place an 800-milliliter beaker containing 100 milliliters of the appropriate food-simulating solvent into the constant temperature bath, cover with a watch glass and condition at the desired temperature.

(*d*) After conditioning, carefully lower the sample sandwich with tongs into the beaker.

(*e*) At the end of the extraction period, using the tongs, carefully lift out the sample sandwich and hang it over the beaker with the wire.

(*f*) After draining, pour the food-simulating solvent solution into a tared 250-milliliter beaker. Rinse the 800-milliliter beaker three times, using a total of not more than 50 milliliters of the required solvent.

(*g*) Determine total nonvolatile extractives in accordance with paragraph (d) (5) of this section.

(4) *Selection of samples.* Quadruplicate samples should be tested, using for each replicate sample the number of cups, containers, or preformed or converted products nearest to an area of 100 square inches.

(5) *Determination of amount of extractives*—(i) *Total residues.* At the end of the exposure period, remove the test container or test cell from the oven and combine the solvent for each replicate in a clean Pyrex (or equivalent) flask or beaker being sure to rinse the test container or cell with a small quantity of clean solvent. Evaporate the food-simulating solvents to about 100 milliliters in the flask or beaker, and transfer to a clean, tared evaporating dish (platinum or Pyrex), washing the flask three times with small portions of solvent used in the extraction procedure, and evaporate to a few milliliters on a nonsparking, low-temperature hotplate. The last few milliliters should be evaporated in an oven maintained at a temperature of approximately 221° F. Cool the evaporating dish in a desiccator for 30 minutes and weigh the residue to the nearest 0.1 milligram, (e). Calculate the extractives in milligrams per square inch of the container or sheeted paper or paperboard surface.

(*a*) *Water and 8- and 50-percent alcohol.* Milligrams extractives per square inch$=\frac{e}{s}$.

(*b*) *Heptane.* Milligrams extractives per square inch$=\frac{e}{(s)(F)}$.

Where:

e=Milligrams extractives per sample tested.

s=Surface area tested, in square inches.

F=Five, the ratio of the amount of extractives removed by heptane under exaggerated time-temperature test conditions compared to the amount extracted by a fat or oil under exaggerated conditions of thermal sterilization and use.

e'=Chloroform-soluble extractives residue.

ee'=Corrected chloroform-soluble extractives residue.

e' or ee' is substituted for e in the above equations when necessary.

If when calculated by the equations in (*a*) and (*b*) of this subdivision, the extractives in milligrams per square inch exceed the limitations prescribed in paragraph (c) of this section, proceed to subdivision (ii) of this subparagraph (method for determining the amount of chloroform-soluble extractives residue).

(ii) *Chloroform-soluble extractives residue.* Add 50 milliliters of chloroform (freshly distilled reagent grade or a grade having an established consistently low blank) to the dried and weighed residue, (e), in the evaporating dish obtained in subdivision (i) of this subparagraph. Warm carefully, and filter through Whatman No. 41 filter paper (or equivalent) in a Pyrex (or equivalent) funnel, collecting the filtrate in a clean, tared evaporating dish (platinum or Pyrex). Repeat the chloroform extraction, washing the filter paper with this second portion of chloroform. Add this filtrate to the original filtrate and evaporate the total down to a few milliliters on a low-temperature hotplate. The last few milliliters should be evaporated in an oven maintained at approximately 221° F. Cool the evaporating dish in a desiccator for 30 minutes and weigh to the nearest 0.1 milligram to get the chloroform-soluble extractives residue (e'). This e' is substituted for e in the equations in (*a*) and (*b*) of subdivision (i) of this subparagraph. If the chloroform-soluble extractives in milligrams per square inch still exceeds the limitation prescribed in paragraph (c) of this section, proceed to subdivision (iii) of this subparagraph (method for determining corrected chloroform-soluble extractives residue).

(iii) *Corrected chloroform-soluble extractives residue*—(*a*) *Correction for zinc extractives.* Ash the residue in the evaporating dish by heating gently over a Meker-type burner to destroy organic matter and hold at red heat for about 1 minute. Cool in the air for 3 minutes, and place the evaporating dish in the desiccator for 30 minutes and weigh to the nearest 0.1 milligram. Analyze this ash for zinc by standard Association of Official Agricultural Chemists methods or equivalent. Calculate the zinc in the ash as zinc oleate, and subtract from the weight of chloroform-soluble extractives residue (e') to obtain the zinc-corrected chloroform-soluble extractives residue ($eé$). This $eé$ is substituted for e in the equations in (*a*) and (*b*) of subdivision (i) of this subparagraph.

(*b*) *Correction for wax, petrolatum, and mineral oil*—(*1*) *Apparatus.* Standard 10 millimeter inside diameter x 60 centimeter chromatographic column (or standard 50-milliliter buret with an inside diameter of 10–11 millimeters) with a stopcock of glass, perfluorocarbon resin, or equivalent material. The column (or buret) may be optionally equipped with an integral coarse, fritted glass disc and the top of the column (or buret) may be optionally fitted with a 100-milliliter solvent reservoir.

(*2*) *Preparation of column.* Place a snug pledget of fine glass wool in the bottom of the column (or buret) if the column (or buret) is not equipped with integral coarse, fritted glass disc. Overlay the glass wool pledget (or fritted glass disc) with a 15–20 millimeter deep layer of fine sand. Measure in a graduated cylinder 15 milliliters of chromatographic grade aluminum oxide (80–200 mesh) that has been tightly settled by tapping the cylinder. Transfer the aluminum oxide to the chromatographic tube, tapping the tube during and after the transfer so as to tightly settle the aluminum oxide. Overlay the layer of aluminum oxide with a 1.0–1.5 centimeter deep layer of anhydrous sodium sulfate and on top of this place an 8–10 millimeter thick plug of fine glass wool. Next carefully add about 25 milliliters of heptane to the column with stopcock open, and allow the heptane to pass through the column until the top level of the liquid just passes into the top glass wool plug in the column, and close stopcock.

(*3*) *Chromatographing of sample extract*—(*i*) *For chloroform residues weighing 0.5 gram or less.* To the dried and weighed chloroform-soluble extract residue in the evaporating dish, obtained in subdivision (ii) of this subparagraph, add 20 milliliters of heptane and stir. If necessary, heat carefully to dissolve the residue. Additional heptane not to exceed a total volume of 50 milliliters may be used if necessary to complete dissolving. Cool to room temperature. (If solution becomes cloudy use the procedure in (iii) (*b*) (*3*) (*ii*) of this subparagraph to obtain an aliquot of heptane solution calculated to contain 0.1–0.5 gram of chloroform-soluble extract residue.) Transfer the clear liquid solution to the column (or buret). Rinse the dish with 10 milliliters of additional heptane and add to column. Allow the liquid to pass through the column into a clean, tared evaporating dish (platinum or Pyrex) at a dropwise rate of about 2 milliliters per minute until the liquid surface reaches the top glass wool plug; then close the stopcock temporarily. Rinse the Pyrex flask which contained the filtrate with an additional 10–15 milliliters of heptane and add to the column. Wash (elute) the column with more heptane collecting about 100 milliliters of total eluate including that already collected in the evaporating dish. Evaporate the combined eluate in the evaporating dish to dryness on a steam bath. Dry the residue for 15 minutes in an oven maintained at a temperature of approximately 221° F. Cool the evaporating dish in a desiccator for 30 minutes and weigh the residue to the nearest 0.1 milligram. Subtract the weight of the residue from the weight of chloroform-soluble extractives residue (e') to obtain the wax-, petrolatum-, and mineral oil-corrected chloroform-soluble extractives residue (ee'). This ee' is substituted for e in the equations in (*a*) and (*b*) of subdivision (i) of this subparagraph.

(*ii*) *For chloroform residues weighing more than 0.5 gram.* Redissolve the dried and weighed chloroform-soluble extract residue as described in (iii) (*b*) (*3*) (*i*) of this subparagraph using proportionately larger quantities of heptane. Transfer the heptane solution to an appropriate-sized volumetric flask (i.e., a 250-milliliter flask for about 2.5 grams of residue) and adjust to volume with additional heptane. Pipette out an aliquot (about 50 milliliters) calculated to contain 0.1–0.5 gram of the chloroform-soluble extract residue and analyze chromatographically as described in (iii) (*b*) (*3*) (*i*) of this subparagraph. In this case the weight of the dried residue from the heptane eluate must be multiplied by the dilution factor to obtain the weight of wax, petrolatum, and mineral oil residue to be subtracted from the weight of chloroform-soluble extractives residue (e') to obtain the wax-, petrolatum-, and mineral oil-corrected chloroform-soluble extractives residue (*ee'*). This *ee'* is substituted for *e* in the equations in (*a*) and (*b*) of subdivision (i) of this subparagraph. (Note: In the case of chloroform-soluble extracts which contain high melting waxes (melting point greater than 170° F.), it may be necessary to dilute the heptane solution further so that a 50-milliliter aliquot will contain only 0.1–0.2 gram of the chloroform-soluble extract residue.)

§ 121.2527 Antistatic agents in plastics.

The substances listed in paragraph (b) of this section may be safely used as antistatic agents in plastics used in the manufacture of articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect nor any limitations further provided.

(b) List of substances:

	Limitations
N,N-Bis(2-hydroxyethyl) alkyl(C_{12}–C_{18}) amine.	For use only at levels not to exceed 0.1 percent by weight of polyolefin food-contact films.

§ 121.2528 Ethylene-methyl acrylate copolymer resins.

Ethylene-methyl acrylate copolymer resins may be safely used as articles or components of articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, the ethylene-methyl acrylate copolymer resins consist of basic copolymers produced by the copolymerization of ethylene and methyl acrylate such that the copolymers contain no more than 25 weight percent of polymer units derived from methyl acrylate.

(b) The finished food-contact article, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2526(c), yields net chloroform-soluble extractives (corrected for zinc extractives as zinc oleate) in each extracting solvent not to exceed 0.5 milligram per square inch of food-contact surface when tested by the methods described in § 121.2526(d). If the finished food-contact article is itself the subject of a regulation in this Subpart F, it shall also comply with any specifications and limitations prescribed for it by that regulation.

NOTE: In testing the finished food-contact article, use a separate test sample for each required extracting solvent.

(c) The provisions of this section are not applicable to ethylene-methyl acrylate copolymer resins used in food-packaging adhesives complying with § 121.2520.

§ 121.2529 3,5-Dimethyl-1,3,5,2*H*-tetrahydrothiadiazine-2-thione.

3,5 - Dimethyl - 1,3,5,2*H* - tetrahydrothiadiazine-2-thione may safely be used as a preservative in the manufacture and coating of paper and paperboard intended for use in contact with food in accordance with the following prescribed conditions:

(a) It is used as follows:

(1) In the manufacture of paper and paperboard as a preservative for substances added to the pulp suspension prior to the sheet-forming operation, provided that the preservative is volatilized by heat in the drying and finishing of the paper and paperboard.

(2) As a preservative for coatings for paper and paperboard, provided that the preservative is volatilized by heat in the drying and finishing of the coated paper or paperboard.

(b) The quantity used shall not exceed the least amount reasonably required to accomplish the intended technical effect and shall not be intended to nor, in fact, accomplish any physical or technical effect in the food itself.

(c) The use of a preservative in any substance or article subject to any regulation in Subpart F of this part must comply with any specifications and limitations prescribed by such regulation for the substance or article.

§ 121.2530 Reinforced wax.

Reinforced wax may be safely used as an article or component of articles intended for use in producing, manufacturing, packing, processing, transporting, or holding food subject to the provisions of this section.

(a) Reinforced wax consists of petroleum wax to which have been added certain optional substances required in its production, or added to impart desired physical or technical properties.

(b) The quantity of any optional adjuvant substance employed in the production of or added to reinforced wax does not exceed the amount reasonably required to accomplish the intended physical or technical effect or any limitation provided in this section.

(c) Any substance employed in the production of reinforced wax, including any optional substance, that is the subject of a regulation in Subpart F of this part, conforms with any specifications in such regulation, and any substance that is not the subject of a regulation in Subpart F conforms with the specifications, if any, prescribed by a current order extending the effective date of the statute for such substance as an indirect additive to food.

(d) The substances and optional adjuvant substances employed in the production of or added to reinforced wax include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction for use in reinforced wax and used in accordance with such sanction or approval.

(3) Substances identified in this subparagraph and subject to any limitations provided therein:

List of substances	*Limitations*
Copolymer of isobutylene modified with isoprene	----
Petroleum wax, Type I and Type II	----
Polyethylene	----
Rosins and rosin derivatives as provided in § 121.2592	----

(e) Reinforced wax conforming with the specifications in this paragraph is used as provided in subparagraph (2) of this paragraph.

(1) The chloroform-soluble portion of the water extract obtained by exposing reinforced wax to demineralized water at 70° F. for 48 hours shall not exceed 0.5 milligram per square inch of food-contact surface.

(2) It is used as a packaging material or component of packaging materials for cheese and cheese products.

§ 121.2531 Surface lubricants used in the manufacture of metallic articles.

Surface lubricants may be safely used in the manufacture of metallic articles that contact food, in accordance with the following prescribed conditions:

(a) The surface lubricants are used to facilitate the rolling, drawing, stamping, and forming of metallic articles.

(b) The quantity used shall not exceed the least amount reasonably required to accomplish the intended technical effect and shall not be intended to nor, in fact, accomplish any effect in the food itself; and

(1) The total residual lubricant remaining on the metallic article in the form in which it contacts food shall not exceed 2 milligrams per square foot of metallic food-contact surface.

(2) The use of the lubricants in the manufacture of any article which is the subject of a regulation in Subpart F of this part must comply with any specifications and limitations prescribed by such regulation for the finished form of the article.

(c) Subject to any prescribed limitations, substances permitted to be used in surface lubricants in the manufacture of metallic articles include substances subject to prior sanction or approval for such use and employed under the conditions of use prescribed by such sanction or approval, substances generally recognized as safe for use in food, and the following substances:

Tert-Butyl alcohol.
Butyl stearate.
Castor oil.
Cetyl alcohol.
Cottonseed oil monoglyceride.
Dipropylene glycol.
Ethylenediaminetetraacetic acid, sodium salts.
Isopropyl alcohol.
Lanolin.
Methyl esters of fatty acids (C_{16}–C_{18}) derived from animal and vegetable fats and oils.
Mineral oil.
Myristic acid.
Oleic acid.
Paraffin, refined.
Polyethylene glycol (400) monostearate.
Polyisobutylene (minimum molecular weight 300).
Polyoxyethylene (20) sorbitan monolaurate.
Polyvinyl alcohol.
Potassium oleate.

Sorbitan monolaurate.
Stearic acid.
Stearyl alcohol.
Tallow, sulfonated.
Triethanolamine.

(d) Any substance employed in the production of surface lubricants used in the manufacture of metallic articles which is the subject of a regulation in Subpart F of this part conforms with any specifications in such subpart; and any substance which is not the subject of a regulation in such subpart conforms with the specification, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

§ 121.2532 [Reserved]

§ 121.2533 Copolymer of 1,4-cyclohexylene dimethylene terephthalate and 1,4-cyclohexylene dimethylene isophthalate.

Copolymer of 1,4-cyclohexylene dimethylene terephthalate and 1,4-cyclohexylene dimethylene isophthalate may be safely used as an article or component of articles used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The copolymer is a basic polyester produced by the catalytic condensation of dimethyl terephthalate and dimethyl isophthalate with cyclohexanedimethanol-1,4, to which may have been added certain optional substances required in its production or added to impart desired physical and technical properties.

(b) The quantity of any optional substance employed in the production of the copolymer does not exceed the amount reasonably required to accomplish the intended physical or technical effect or any limitation further provided.

(c) Any substance employed in the production of the copolymer that is the subject of a regulation in this Subpart F conforms with any specification in such regulation, and any substance which is not the subject of a regulation in Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Substances employed in the production of the copolymer include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction or approval for use in the copolymer and used in accordance with such sanction or approval.

(3) Substances which by regulation in Subpart F may be safely used as components of resinous or polymeric coatings and film used as food-contact surfaces, subject to the provisions of such regulation.

(e) The copolymer conforms with the following specifications:

(1) The copolymer, when extracted with distilled water at reflux temperature for 2 hours, yields total extractives not to exceed 0.05 percent.

(2) The copolymer, when extracted with ethyl acetate at reflux temperature for 2 hours, yields total extractives not to exceed 0.7 percent.

(3) The copolymer, when extracted with *n*-hexane at reflux temperature for 2 hours, yields total extractives not to exceed 0.05 percent.

§ 121.2534 Animal glue.

Animal glue may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Animal glue consists of the proteinaceous extractives obtained from hides, bones, and other collagen-rich substances of animal origin (excluding diseased or rotted animals), to which may be added other optional adjuvant substances required in its production or added to impart desired properties.

(b) The quantity of any substance employed in the production of animal glue does not exceed the amount reasonably required to accomplish the intended physical or technical effect nor any limitation further provided.

(c) Any substance employed in the production of animal glue and which is the subject of a regulation in this subpart conforms with any specifications in such regulation; and any substance that is not the subject of a regulation in this subpart conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Optional adjuvant substances employed in the production of animal glue include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction or approval for use in animal glue and used in accordance with such sanction or approval.

(3) Substances identified in this subparagraph and subject to such limitations as are provided:

List of substances	Limitations
Alum (double sulfate of aluminum and ammonium, potassium, or sodium).	
4-Chloro-3-methylphenol (p-chloro-metacresol).	For use as preservative only.
Chromium potassium sulfate (chrome alum).	For use only in glue used as a colloidal flocculant added to the pulp suspension prior to the sheet-forming operation in the manufacture of paper and paperboard.
3,5-Dimethyl-1,3,5,2*H*-tetrahydrothiadiazine-2-thione.	For use as preservative only.
Disodium cyanodithioimidocarbonate.	Do.
Defoaming agents	As provided in § 121.2519.
Ethanolamine	
Ethylenediamine	
Formaldehyde	For use as a preservative only.
Potassium *N*-methyldithiocarbamate.	Do.
Potassium pentachlorophenate	Do.
Rosins and rosin derivatives	As provided in § 121.2592.
Sodium chlorate	
Sodium dodecylbenzenesulfonate	
Sodium 2-mercaptobenzothiazole	For use as preservative only.
Sodium pentachlorophenate	Do.
Sodium o-phenylphenate	Do.
Zinc dimethyldithiocarbamate	Do.
Zinc 2-mercaptobenzothiazole	Do.

(e) The conditions of use are as follows:

(1) The use of animal glue in any substance or article that is the subject of a regulation in this subpart conforms with any specifications or limitations prescribed by such regulation for the finished form of the substance or article.

(2) It is used as an adhesive or component of an adhesive in accordance with the provisions of § 121.2520 of this subpart.

(3) It is used as a colloidal flocculant added to the pulp suspension prior to the sheet-forming operation in the manufacture of paper and paperboard.

(4) It is used as a protective colloid in resinous and polymeric emulsion coatings.

§ 121.2535 Textiles and textile fibers.

Textiles and textile fibers may safely be used as articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The textiles and textile fibers are prepared from one or more of the fibers identified in paragraph (d) of this section and from certain other adjuvant substances required in the production of the textiles or textile fibers or added to impart desired properties.

(b) The quantity of any adjuvant substance employed in the production of textiles or textile fibers does not exceed the amount reasonably required to accomplish the intended physical or technical effect or any limitation further provided.

(c) Any substance employed in the production of textiles or textiles fibers that is the subject of a regulation in this Subpart F of this part conforms with any specification in such regulation, and any substance that is not the subject of a regulation in this Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Substances employed in the production of or added to textiles and textile fibers may include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction or approval for use in textiles and textile fibers and used in accordance with such sanction or approval.

(3) Substances generally recognized as safe for use in cotton and cotton fabrics used in dry-food packaging.

(4) Substances that by regulation in this part may safely be used in the production of or as a component of textiles or textile fibers and subject to provisions of such regulation.

(5) Substances identified in this subparagraph, subject to such limitations as are provided:

List of substances	Limitation
(i) Fibers:	
Cotton	
Rayon	
(ii) Adjuvant substances:	
Aluminum stearate	
4,4′-Bis (4-anilino-6-diethanolamine-α-triazin-2-ylamino)-2,2′-stilbene-disulfonic acid, disodium salt.	For use as colorant only.
4,4′-Bis(4-anilino-6-methylethanolamine-α-triazin-2-ylamino)-2,2′-stilbene-disulfonic acid, disodium salt.	Do.
Borax	For use as preservative only.
Butyl-acetyl ricinoleate	
Di-*tert*-butyl hydroquinone	
Dimethylpolysiloxane	
Ethylenediaminetetraacetic acid, sodium salt.	
Eugenol	
Fats, oils, fatty acids, and fatty alcohols derived from castor, coconut, cottonseed, fish, mustardseed, palm, peanut, rapeseed, ricebran, soybean, sperm, and tall oils and tallow.	
Fats, oils, fatty acids, and fatty alcohols described in the preceding item reacted with one or more of the following substances:	
n-Butyl and isobutyl alcohol	
Diethylene glycol	
Diethanolamine	
Glycerol	
Hexylene glycol (2-methyl-2,4-pentanediol).	
Hydrogen	
Isopropyl alcohol	
Methyl alcohol	
Oxygen	
Polyethylene glycol (molecular weight 400—3,000).	
Potassium hydroxide	
Propylene glycol	
Sodium hydroxide	
Sulfuric acid	
Formaldehyde	For use as preservative only.
Glyceryl mono-12-hydroxystearate	
2-(9-Heptadecenyl)-1-[2-(10-octadecenamido) ethyl]-2-imidazolinium ethyl sulfate.	
Hexylene glycol (2-methyl-2,4-pentanediol).	
Isobutyl alcohol	
Isopropyl alcohol	
Kerosine	
Methyl ester of sulfated ricebran oil	
Mineral oil	For use only at a level not to exceed 0.15 percent by weight of finished fibers.
Mono- and diisopropylated *m*- and *p*-cresols (isothymol derivative).	
N-Oleyl, *N*′-acetyl, *N*′-β-hydroxy-ethyl ethylenediamine.	
Petrolatum	
Petroleum sulfonate	
Pine oil	
Polyethylene, oxidized (air blown)	
Polyoxyethylene (20) sorbitan monolaurate.	
Polyoxyethylene (20) sorbitan monostearate.	
Polyvinyl acetate	
Polyvinyl aclohol	
Potassium soap of a saponified sulfated castor oil.	
Sodium bis(2,6-dimethylheptyl-4) sulfosuccinate.	
Sodium dioctyl sulfosuccinate	
Sodium dodecyl benzenesulfonate	
Sodium fluoride	For use as preservative only.
Sodium hydrosulfite	
Sodium hypochlorite	
Sodium lauryl sulfate	
Sodium 2-mercaptobenzothiazole	For use as preservative only.
Sodium pentachlorophenate	Do.
Styrene-butadiene copolymer	
Sulfated butyl, isobutyl and propyl oleate.	
Tallow	
Tallow, sulfonated	
Titanium dioxide	
Triethanolamine	
Ultramarine blue	
Waxes, petroleum	
Zinc hydrosulfite	

(e) Textile and textile fibers are used as articles or components of articles that contact dry food only.

§ 121.2536 Filters, resin-bonded.

Resin-bonded filters may be safely used in producing, manufacturing, processing, and preparing food, subject to the provisions of this section.

(a) Resin-bonded filters are prepared from natural or synthetic fibers to which have been added substances required in their preparation and finishing, and which are bonded with resins prepared by condensation or polymerization of resin-forming materials, together with adjuvant substances required in their preparation, application, and curing.

(b) The quantity of any substance employed in the production of the resin-bonded filter does not exceed the amount reasonably required to accomplish the intended physical or technical effect or any limitation further provided.

(c) Any substance employed in the production of resin-bonded filters that is the subject of a regulation in this Subpart F of this part conforms with any specification in such regulation, and any substance that is not the subject of a regulation in such subpart conforms with the specification, if any, provided by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Substances employed in the production of resin-bonded filters include the following, subject to any limitations provided:

List of Substances and Limitations

(1) *Fibers:*
  Cellulose pulp.
  Cotton.
  Nylon. (From nylon resins complying with the provisions of applicable regulations in Subpart F.)
  Rayon (viscose).
(2) *Substances employed in fiber finishing:*
  BHT.
  Butyl (or isobutyl) palmitate or stearate.
  2,5-Di-*tert*-butyl hydroquinone for use only in lubricant formulations for rayon fiber finishing and at a usage level not to exceed 0.1 percent by weight of the lubricant formulations.
  Dimethylpolysiloxane.
  Fatty acid (C_{12}–C_{18}) diethanolamide condensates.
  Fatty acids derived from animal or vegetable fats and oils, and salts of such acids, single or mixed, as follows:
    Aluminum.
    Ammonium.
    Calcium.
    Magnesium.
    Potassium.
    Sodium.
    Triethanolamine.
  Fatty acid (C_{12}–C_{18}) mono- and diesters of polyoxyethylene glycol (molecular weight 400–3,000).
  Methyl esters of fatty acids (C_{12}–C_{18}).
  Mineral oil.
  Polyoxyethylene (9–10 mols) ether of octyl- or nonylphenol.
  Polyoxyethylene (4 mols) ethylenediamine monolauramide for use only in lubricant formulations for rayon fiber finishing and at a usage level not to exceed 10 percent by weight of the lubricant formulations.
  Ricebran oil.
  Titanium dioxide.
(3) *Resins:*
  Melamine-formaldehyde chemically modified with one or more of the amine catalysts identified in § 121.2514(b)(3)(xiii).
  Phenol-formaldehyde resins.
  Polyvinyl alcohol.
  Polyvinyl alcohol with the copolymer of acrylic acid-allyl sucrose.
  Polyvinyl alcohol with melamine formaldehyde.
  Polyvinyl acetate with melamine formaldehyde.
  p-Toluenesulfonamide-formaldehyde chemically modified with one or more of the amine catalysts identified in § 121.2514(b)(3)(xiii).
(4) *Adjuvant substances:*
  Dimethyl polysiloxane with methylcellulose and sorbic acid. (As an antifoaming agent.)
  Phosphoric acid.
  Polysorbate 80.

(e) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph:

(1) *Total extractives.* The finished filter, when exposed to distilled water at 100° F. for 2 hours, yields total extractives not to exceed 2.8 percent by weight of the filter.

(2) *Conditions of use.* It is used to filter milk or potable water at operating temperatures not to exceed 100° F.

(f) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph:

(1) *Total extractives.* The finished filter, when exposed to distilled water at 145° F. for 2 hours, yields total extractives not to exceed 4 percent by weight of the filter.

(2) *Conditions of use.* It is used to filter milk or potable water at operating temperatures not to exceed 145° F.

(g) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph.

(1) *Total extractives.* The finished filter, when exposed to *n*-hexane at reflux temperature for 2 hours, yields total extractives not to exceed 0.5 percent by weight of the filter.

(2) *Conditions of use.* It is used to filter edible oils.

(h) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph.

(1) *Total extractives.* The finished filter, when exposed to distilled water at 212° F. for 2 hours, yields total extractives not to exceed 4 percent by weight of the filter.

(2) *Conditions of use.* It is used to filter milk, coffee, tea, and potable water at temperatures not to exceed 212° F.

(i) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph:

(1) *Total extractives.* The finished filter, when exposed to distilled water for 2 hours at a temperature equivalent to, or higher than, the filtration temperature of the aqueous food, yields total extractives not to exceed 4 percent, by weight, of the filter.

(2) *Conditions of use.* It is used in commercial filtration of bulk quantities of nonalcoholic, aqueous foods having a pH above 5.0.

(j) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph:

(1) *Total extractives.* The finished filter, when exposed to 5 percent (by weight) acetic acid for 2 hours at a temperature equivalent to, or higher than, the filtration temperature of the aqueous food, yields total extractives not to exceed 4 percent, by weight, of the filter.

(2) *Conditions of use.* It is used in commercial filtration of bulk quantities of nonalcoholic, aqueous foods having a pH of 5.0 or below.

(k) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph:

(1) *Total extractives.* The finished filter, when exposed to 8 percent (by volume) ethyl alcohol in distilled water for 2 hours at a temperature equivalent to, or higher than, the filtration temperature of the alcoholic beverage, yields total extractives not to exceed 4 percent, by weight, of the filter.

(2) *Conditions of use.* It is used in commercial filtration of bulk quantities of alcoholic beverages containing not more than 8 percent alcohol.

(l) Resin-bonded filters conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph:

(1) *Total extractives.* The finished filter, when exposed to 50 percent (by volume) ethyl alcohol in distilled water for 2 hours at a temperature equivalent to, or higher than, the filtration temperature of the alcoholic beverage, yields total extractives not to exceed 4 percent, by weight, of the filter.

(2) *Conditions of use.* It is used in commercial filtration of bulk quantities of alcoholic beverages containing more than 8 percent alcohol.

§ 121.2537 Anti-offset substances.

Substances named in paragraphs (b) and (c) of this section may be safely used to prevent the transfer of inks employed in printing and decorating paper and paperboard used for food packaging in accordance with the provisions of this section:

(a) The substances are applied to the nonfood contact, printed side of the paper or paperboard in an amount not greater than that required to accomplish the technical effect nor greater than any specific limitations, where such are provided.

(b) Anti-offset powders are prepared from substances that are generally recognized as safe in food, substances for which prior sanctions or approvals were granted and which are used in accordance with the specific provisions of such sanction or approval, and substances named in paragraph (c) of this section.

(c) The substances permitted are as follows:

Substances	*Limitations*
Carbon tetrachloride	
Methyl hydrogen polysiloxanes	
Industrial starch—modified	Complying with § 121.2506.
Tin oleate	
Zinc-2-ethyl hexoate	

§ 121.2538 Alkyl ketene dimers.

Alkyl ketene dimers may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The alkyl ketene dimers are manufactured by the dehydrohalogenation of the acyl halides derived from the fatty acids of animal or vegetable fats and oils.

(b) The alkyl ketene dimers are used as an adjuvant in the manufacture of paper and paperboard under such conditions that the alkyl ketene dimers and their hydrolysis products dialkyl ketones do not exceed 0.4 percent by weight of the paper or paperboard.

(c) The alkyl ketene dimers may be used in the form of an aqueous emulsion which may contain sodium lignosulfonate as a dispersant.

§ 121.2539 Tamarind seed kernel powder.

Tamarind seed kernel powder may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Tamarind seed kernel powder is the ground kernel of tamarind seed (Tamarindus indica L.) after removal of the seed coat.

(b) It is used in the manufacture of paper and paperboard.

§ 121.2540 Copolymer of vinyl acetate and crotonic acid.

A copolymer of vinyl acetate and crotonic acid may be safely used as a coating or as a component of a coating which is the food-contact surface of polyolefin films intended for packaging food, subject to the provisions of this section.

(a) The copolymer may contain added optional substances to impart desired properties.

(b) The quantity of any optional substance does not exceed the amount reasonably required to accomplish the intended physical or technical effect nor any limitations further provided.

(c) Any optional substance that is the subject of a regulation in this Subpart F conforms with any specifications in such regulation, and any substance that is not the subject of a regulation in Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Optional substances as provided in paragraph (a) of this section include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction or approval for uses with a copolymer of vinyl acetate and crotonic acid and used in accordance with such sanction or approval.

(3) Substances identified in this subparagraph and subject to such limitations as are provided:

List of substances	*Limitations*
Silica	
Japan wax	

(e) Copolymer of vinyl acetate and crotonic acid used as a coating or as a component of a coating conforming with the specifications of subparagraph (1) of this paragraph are used as provided in subparagraph (2) of this paragraph.

(1) *Specifications.* (i) The chloroform-soluble portion of the water extractives of the coated film obtained with distilled water at 120° F. for 24 hours does not exceed 0.5 milligram per square inch of coated surface.

(ii) The chloroform-soluble portion of the *n*-heptane extractives of the coated film obtained with *n*-heptane at 70° F. for 30 minutes does not exceed 0.5 milligram per square inch of coated surface.

(2) *Conditions of use.* The copolymer of vinyl acetate and crotonic acid is used as a coating or as a component of a coating for polyolefin films for packaging bakery products and confectionery.

§ 121.2541 Emulsifiers and/or surface-active agents.

The substances listed in paragraph (c) of this section may be safely used as emulsifiers and/or surface-active agents in the manufacture of articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect; and the quantity that may become a component of food as a result of such use shall not be intended to, nor in fact, accomplish any physical or technical effect in the food itself.

(b) The use as an emulsifier and/or surface-active agent in any substance or article that is the subject of a regulation in this Subpart F conforms with any specifications and limitations prescribed by such regulation for the finished form of the substance or article.

(c) List of substances:

p-tert-Octylphenoxypolyethoxyethanol (40 moles) with a hydroxyl number not to exceed 37; if a blend of products is used, hydroxyl number not to exceed 37 for any product that is a component of the blend.

Sodium dioctyl sulfosuccinate.

Sodium lauryl sulfate.

Sodium monododecylphenoxybenzenedisulfonate and sodium didodecylphenoxybenzenedisulfonate mixtures that contain not less than 70 percent of the monoalkylated product.

Tetrasodium *N*-(1,2-dicarboxyethyl)-*N*-octadecylsulfoccinamate, for use only as a polymerization emulsifier for resins applied to tea-bag material.

§ 121.2542 Polyamide-epichlorohydrin resin.

Polyamide-epichlorohydrin resin may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Polyamide-epichlorohydrin resin is prepared by reacting adipic acid with diethylenetriamine to form a basic polyamide and further reaction of the polyamide with epichlorohydrin to form a water-soluble thermo-setting resin.

(b) The resin is used in the manufacture of paper and paperboard under conditions such that the polyamide-epichlorohydrin resin does not exceed 1.5 percent by weight of the paper or paperboard.

§ 121.2543 Packaging materials for use in radiation preservation of prepackaged foods.

The packaging materials identified in this section may be safely subjected to irradiation incidental to the radiation preservation of prepackaged foods, subject to the provisions of this section.

(a) The radiation preservation of the food itself shall comply with regulations in Subpart G of this Part 121.

(b) The following packaging materials may be subjected to a dose of irradiation, not to exceed 1 megarad, incidental to the use of gamma radiation in the radiation preservation of prepackaged foods:

(1) Nitrocellulose-coated or vinylidene chloride copolymer-coated cellophane complying with § 121.2507.

(2) Glassine paper complying with § 121.2526.

(3) Wax-coated paperboard complying with § 121.2526.

(4) Polypropylene film prepared from polypropylene basic polymer complying with § 121.2501. The finished film may contain adjuvant substances used in compliance with §§ 121.2001 and 121.2511.

(5) Ethylene-alkene-1 copolymer film complying with § 121.2508.

(6) Polyethylene film complying with § 121.2510.

(7) Polystyrene film prepared from styrene basic polymer. The finished film may contain adjuvant substances used in compliance with §§ 121.2001 and 121.2511.

(8) Rubber hydrochloride film prepared from rubber hydrochloride basic polymer having a chlorine content of 30–32 weight percent and having a maximum extractable fraction of 2 weight percent when extracted with *n*-hexane at reflux temperature for 2 hours. The finished film may contain adjuvant substances used in compliance with §§ 121.2001 and 121.2511.

(9) Vinylidene chloride-vinyl chloride copolymer film prepared from vinylidene chloride-vinyl chloride basic copolymers containing not less than 70 weight percent of vinylidene chloride and having a viscosity of 0.50–1.50 centipoises as determined by ASTM method D 729–57. The finished film may contain adjuvant substances used in compliance with §§ 121.2001 and 121.2511.

(c) The following packaging materials may be subjected to a dose of radiation, not to exceed 6 megarads incidental to the use of gamma or X-radiation in the radiation processing of prepackaged foods:

(1) Vegetable parchments, consisting of a cellulose material made from waterleaf paper (unsized) treated with concentrated sulfuric acid, neutralized, and thoroughly washed with distilled water.

(2) [Reserved]

§ 121.2544 Tetrahydrofuran.

Tetrahydrofuran may be safely used in the fabrication of articles intended for packaging, transporting, or storing foods, subject to the provisions of this section.

(a) It is used as a solvent in the casting of film from a solution of polymeric resins of vinyl chloride, vinyl acetate, or vinylidene chloride that have been polymerized singly or copolymerized with one another in any combination.

(b) The residual amount of tetrahydrofuran in the film does not exceed 1.5 percent by weight of film.

§ 121.2545 Textryls.

Textryls identified in this section may be safely used as articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting or holding food, subject to the provisions of this section.

(a) Textryls are nonwoven sheets prepared from natural or synthetic fibers, bonded with fibryl (Fibryl consists of a polymeric resin in fibrous form commingled with fiber to facilitate sheet formation and subsequently heat cured to fuse the fibryl and effect bonding).

(b) Textryls are prepared from the fibers, fibryls, and adjuvants identified in paragraph (c) of this section, and subject to limitations prescribed in that paragraph; *Provided, however*, That any substance that is the subject of a regulation in this Subpart F conforms with any specifications in such regulation for that substance as a component of polymeric resins used as food contact surfaces, and any substance that is not the subject of a regulation in this Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(c) The fibers, fibryls, and adjuvants permitted are as follows:

Substances	*Limitations*
(1) Fibers prepared from polyethylene terephthalate resins.	Conforming with § 121.2524.
(2) Fibryls prepared from vinyl chloride-vinyl acetate copolymer.	As the basic polymer.
(3) Adjuvant substance, dimethylformamide...	As a solvent in the preparation of fibryl.

(d) Textryls meeting the conditions of test prescribed in subparagraph (1) of this paragraph are used as prescribed in subparagraph (2) of this paragraph.

(1) *Conditions of test.* Textryls, when extracted with distilled water at reflux temperature for 1 hour, yield total extractives not to exceed 1 percent.

(2) *Uses.* Textryls are used for packaging or holding food at ordinary temperatures and in the brewing of hot beverages.

§ 121.2546 Pulp from reclaimed fiber.

(a) Pulp from reclaimed fiber may be safely used as a component of articles used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of paragraph (b) of this section.

(b) Pulp from reclaimed fiber is prepared from the paper and paperboard products described in subparagraphs (1) and (2) of this paragraph, by repulping with water to recover the fiber with the least possible amount of nonfibrous substances.

(1) Industrial waste from the manufacture of paper and paperboard products.

(2) Salvage from used paper and paperboard excluding that which bears or contains, or has been used for shipping or handling any poisonous or deleterious substance which may have contaminated the paper or paperboard and which may reasonably be expected to be retained in the recovered pulp.

§ 121.2547 Sanitizing solutions.

Sanitizing solutions may be safely used on food-processing equipment and utensils in accordance with the following prescribed conditions:

(a) Such sanitizing solutions are used, followed by adequate draining, before contact with food.

(b) The solutions consist of one of the following:

(1) An aqueous solution containing potassium, sodium, or calcium hypochlorite, with or without the bromides of potassium, sodium, or calcium.

(2) An aqueous solution containing dichloroisocyanuric acid, trichloroisocyanuric acid, or the sodium or potassium salts of these acids, with or without the bromides of potassium, sodium, or calcium.

(3) An aqueous solution containing potassium iodide, sodium *p*-toluenesul-

fonchloramide, and sodium lauryl sulfate in addition to components generally recognized as safe for the purpose.

(4) An aqueous solution containing iodine, butoxy monoether of mixed (ethylene-propylene) polyalkylene glycol having a cloud-point of 90° C.–100° C. in 0.5 percent aqueous solution and an average molecular weight of 3300, ethylene glycol monobutyl ether, and diethylene glycol monoethyl ether, together with components generally recognized as safe.

(c) The solutions identified in paragraph (b) will not exceed the following concentrations:

(1) Solutions identified in paragraph (b)(1) will provide not more than 200 parts per million of available halogen determined as available chlorine.

(2) Solutions identified in paragraph (b)(2) will provide not more than 100 parts per million of available halogen determined as available chlorine.

(3) Solutions identified in paragraph (b)(3) will contain potassium iodide and sodium p-toluenesulfonchloramide at a level not in excess of the minimum required to provide not more than 25 parts per million of titratable iodine. The solutions will contain sodium lauryl sulfate at a level not in excess of the minimum required to produce its intended functional effect.

(4) Solutions identified in paragraph (b)(4) will contain iodine not in excess of the minimum required to provide not more than 25 parts per million of titratable iodine. The adjuvants used with the iodine will not be in excess of the minimum amounts required to accomplish the intended technical effect.

(d) Sanitizing agents for use in accordance with this section will bear labeling meeting the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act.

§ 121.2548 Zinc-silicon dioxide matrix coatings.

Zinc-silicon dioxide matrix coatings may be safely used as the food-contact surface of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The coating is applied to a metal surface, cured, and washed with water to remove soluble substances.

(b) The coatings are formulated from optional substances which include:

(1) Substances generally recognized as safe.

(2) Substances for which safe conditions of use have been prescribed in § 121.2514.

(3) Substances identified in paragraph (c) of this section, subject to the limitations prescribed.

(c) The optional substances permitted are as follows:

List of substances	*Limitations*
Ethylene glycol	As a solvent removed by water washing.
Iron oxide	
Lithium hydroxide	Removed by water washing.
Methyl orange	As an acid-base indicator.
Potassium dichromate	Removed by water washing.
Silica gel	
Sodium silicate	
Zinc, as particulate metal	

(d) The coating in the finished form in which it is to contact food, when extracted with the solvent or solvents characterizing the type of food, and under the conditions of its intended use as shown in Tables 1 and 2 of § 121.2514 (d) (using 20 percent alcohol as the solvent when the type of food contains approximately 20 percent alcohol) shall yield total extractives not to exceed those prescribed in § 121.2514(c)(3); lithium extractives not to exceed 0.025 milligram per square inch of surface; and chromium extractives not to exceed 0.05 microgram per square inch of surface.

(e) The coatings are used as food-contact surfaces for bulk reusable containers intended for storing, handling, and transporting food.

§ 121.2549 Melamine-formaldehyde resins in molded articles.

Melamine-formaldehyde resins may be safely used as the food-contact surface of molded articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) For the purpose of this section, melamine-formaldehyde resins are those produced when 1 mole of melamine is made to react with not more than 3 moles of formaldehyde in water solution.

(b) The resins may be mixed with refined woodpulp and the mixture may contain other optional adjuvant substances which may include the following:

List of substances	*Limitations*
Dioctyl phthalate	For use as lubricant.
Hexamethylenetetramine.	For use only as polymerization reaction control agent.
Phthalic acid anhydride.	Do.
Pigments and colorants identified in § 121.2514(b)(3)(xxvi).	
Zinc stearate	For use as lubricant.

(c) The molded melamine-formaldehyde articles in the finished form in which they are to contact food, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature as determined from tables 1 and 2 of § 121.2514(d), shall yield net chloroform-soluble extractives not to exceed 0.5 milligram per square inch of food-contact surface.

§ 121.2550 Closures with sealing gaskets for food containers.

Closures with sealing gaskets may be safely used on containers intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) Closures for food containers are manufactured from substances generally recognized as safe for contact with food; substances that are subject to the provisions of prior sanctions; substances authorized by regulations in this Subpart F; and closure-sealing gaskets, as further prescribed in this section.

(b) Closure-sealing gaskets and overall discs are formulated from substances identified in § 121.2514(b), with the exception of subparagraph (3)(v), (xxxi), and (xxxii) of that paragraph, and from other optional substances, including the following:

(1) Substances generally recognized as safe in food.

(2) Substances used in accordance with the provisions of a prior sanction or approval within the meaning of section 201(s) of the act.

(3) Substances that are the subject of regulations in this Subpart F and used in accordance with the conditions prescribed.

(4) Substances identified in subparagraph (5) of this paragraph, used in amounts not to exceed those required to accomplish the intended physical or technical effect and in conformance with any limitation provided; and further provided that any substance employed in the production of closure-sealing gasket compositions that is the subject of a regulation in this Subpart F or of an extension of the effective date relating to substances used in such food-packaging material conforms with the identity or specifications prescribed.

(5) Substances that may be employed in the manufacture of closure-sealing gaskets include:

TABLE 1

List of substances	Limitations (expressed as percent by weight of closure-sealing gasket composition)
Balata rubber	
Chlorinated isobutylene-isoprene copolymers complying with § 121.2590.	
Cork (cleaned, granulated)	
Dextrin	
Di-2-ethylhexyl adipate	
Eicosane (technical grade) (water-white mixture of predominantly straight-chain paraffin hydrocarbons averaging 20 carbon atoms per molecule).	
Epoxidized linseed oil	
Epoxidized linseed oil modified with trimellitic anhydride.	
Epoxidized safflower oil.	
Epoxidized safflower oil modified with trimellitic anhydride.	
Epoxidized soybean oil modified with trimellitic anhydride.	
Ethylene-propylene copolymer	
Ethylene-vinyl acetate copolymer	
Gutta-percha	
Isobutylene-isoprene copolymers complying with § 121.2590.	

TABLE 1—Continued

List of substances	Limitations (expressed as percent by weight of closure-sealing gasket composition)
Natural rubber (crepe, latex, mechanical dispersions).	
Polybutadiene	
Polyisobutylene complying with § 121.2590.	
Rosins and rosin derivatives	As defined in § 121.2514(b)(3)(v) for use only in resinous and polymeric coatings on metal substrates; for all other uses as defined in § 121.2592.
Vinyl chloride-vinyl stearate copolymer.	
Arachidyl-behenyl amide (C_{20}-C_{22} fatty acid amides).	Less than 5% in closure-sealing gasket composition.
Disodium phosphate	Do.
Erucyl amide	Do.
Maleic anhydride-polyethylene copolymer.	Less than 5% in closure-sealing gasket composition.
Maleic anhydride-styrene copolymer.	Do.
Stearic acid amide	Do.
Azodicarbonamide	Less than 2% in closure-sealing gasket composition.
Calcium tin stearate	Do.
Calcium zinc stearate	Do.
Coco amide (coconut oil fatty acids amides).	Do.
Di-2-ethylhexyl sebacate	Do.
Ethoxylated octyl phenol containing 8-10 mols ethylene oxide (polyoxyethylated octyl phenol (8-10 mols ethylene oxide)).	Do.
Glyceryl mono-12-hydroxy stearate (hydrogenated glyceryl ricinoleate).	Do.
Hydrogenated castor oil	Do.
Polysorbate 80 (polyoxyethylene (20) sorbitan monooleate).	Do.
Potassium propionate	Do.
Tin-zinc stearate	Do.
Activated carbon	Less than 1% in closure-sealing gasket composition.
Benzyl alcohol	Do.
Dibetanaphthyl p-phenylenediamine.	Do.
Dihexyl ester of sodium sulfosuccinate.	Do.
Edible monofatty acid ester of polyethylene glycol 400.	Do.
Hexamethylenetetramine	Do.
Hexylene glycol	0.5%.
2,2'-Methylenebis[6-(1-methylcyclohexyl)-p-cresol].	Less than 1% in closure-sealing gasket composition.
Oleyl alcohol	Less than 1% in closure-sealing gasket composition.
4,4'-Oxybis (benzene sulfonyl hydrazide).	0.5%
Paraformaldehyde	Less than 1% in closure-sealing gasket composition.
Polyethylene glycol (mol. wt. over 300).	Do.
Polyoxypropylene-polyoxyethylene condensate, average mol. wt. 2750-3000.	0.05%.
Polyoxyethylene (20) sorbitan monolaurate.	Less than 1% in closure-sealing gasket composition.
Potassium benzoate	Do.
Potassium perchlorate	Do.
Potassium and sodium persulfate	Do.
Sodium cetyl sulfate	Do.
Sodium decyl benzenesulfonate	Do.
Sodium decyl sulfate	Do.
Sodium formaldehyde sulfoxylate	0.05%.
Sodium lauryl sulfate	Less than 1% in closure-sealing gasket composition.
Sodium lignin sulfonate	0.2%.
Sodium myristyl sulfate (sodium tetradecyl sulfate).	0.6%.
Sodium and potassium pentachlorophenate.	0.05%.
Sodium o-phenylphenate	0.05%.
Sodium salt of naphthalenesulfonic acid condensed with formaldehyde.	0.2%.
Sodium salt of triisopropyl naphthalenesulfonic acid.	0.2%.
Sodium tridecylsulfate	0.6%.
Sorbitan monostearate	Less than 1% in closure-sealing gasket composition.
Sulfated tallow	Do.
Tri(mixed mono- and dinonylphenyl) phosphite.	Do.
	For use only in vulcanized natural or synthetic rubber gasket compositions.
Dibenzamide phenyl disulfide	Limit 1% in closure-sealing gasket composition.
Dipentamethylene thiuramtetrasulfide.	Limit 0.4% in closure-sealing gasket composition.
Mercaptoimidazoline	Limit 1% in closure-sealing gasket composition.
Poly-p-dinitroso benzene (activator for butyl rubber).	Less than 1% in closure-sealing gasket composition.
Zinc dibutyldithiocarbamate	Limit 0.8% in closure-sealing gasket composition.

(c) The closure assembly to include the sealing gasket or sealing compound, together with any polymeric or resinous coating, film, foil, natural cork, or glass that forms a part of the food-contact surface of the assembly, when extracted on a suitable glass container with a solvent or solvents characterizing the type of foods, and under conditions of time and temperature characterizing the conditions of its use as determined from Tables 3 and 4 shall yield net chloroform-soluble extractives (corrected for zinc as zinc oleate) not to exceed the tolerances specified in Table 2, calculated on the basis of the water capacity of the container on which the closure is to be used. Employ the analytical method described in § 121.2514, adapting the procedural details to make the method applicable to closures; such as, for example, placing the closed glass container on its side to assure contact of the closure's food-contacting surface with the solvent.

TABLE 2—MAXIMUM EXTRACTIVES TOLERANCES

Type of closure-sealing gasket composition	Chloroform fraction of water extractives	Chloroform fraction of heptane extractives	Chloroform fraction of alcohol extractives
	Parts per million	*Parts per million*	*Parts per million*
1. Plasticized polymers, including unvulcanized or vulcanized or otherwise cured natural and synthetic rubber formed in place as over-all discs or annular rings from a hot melt, solution, plastisol, organisol, mechanical dispersion, or latex	50	500	50
2. Preformed over-all discs or annular rings of plasticized polymers, including unvulcanized natural or synthetic rubber	50	250	50
3. Preformed over-all discs or annular rings of vulcanized plasticized polymers, including natural or synthetic rubber	50	50	50
4. Preformed over-all discs or annular rings of polymeric or resinous-coated paper, paperboard, plastic, or metal foil substrates	50	250	50
5. Closures with sealing gaskets or sealing compositions as described in 1, 2, 3, and 4, and including paper, paperboard, and glassine used for dry foods only	[1]	[1]	[1]

[1] Extractability tests not applicable.

TABLE 3—TYPES OF FOOD

I. Nonacid (pH above 5.0), aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
II. Acidic (pH 5.0 or below), aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
III. Aqueous, acid or nonacid products containing free oil or fat; may contain salt, and including water-in-oil emulsions of low- or high-fat content.
IV. Dairy products and modifications:
  A. Water-in-oil emulsions, high- or low-fat.
  B. Oil-in-water emulsions, high- or low-fat.
V. Low-moisture fats and oils.
VI. Beverages:
  A. Containing alcohol.
  B. Nonalcoholic.
VII. Bakery products.
VIII. Dry solids (no end-test required).

TABLE 4—TEST PROCEDURES WITH TIME-TEMPERATURE CONDITIONS FOR DETERMINING AMOUNT OF EXTRACTIVES FROM CLOSURE-SEALING GASKETS, USING SOLVENTS SIMULATING TYPES OF FOODS AND BEVERAGES

Conditions of use	Types of food (see Table 3)	Extractant		
		Water (time and temperature)	Heptane[1] (time and temperature)	8% alcohol (time and temperature)
A. High temperature heat-sterilized (e.g., over 212° F.).	I, IV-B	250° F., 2 hr.		
	III, IV-A, VII	250° F., 2 hr.	150° F., 2 hr.	
B. Boiling water-sterilized	II	212° F., 30 min.		
	III, VII	212° F., 30 min.	120° F., 30 min.	
C. Hot filled or pasteurized above 150° F.	II, IV-B	Fill boiling, cool to 100° F.		
	III, IV-A	Fill boiling, cool to 100° F.	120° F., 15 min.	
	V		120° F, 15 min.	
D. Hot filled or pasteurized below 150° F.	II, IV-B, VI-B	150° F., 2 hr.		
	III, IV-A	150° F., 2 hr.	100° F., 30 min.	
	V		100° F., 30 min.	
	VI-A			150° F., 2 hr.
E. Room temperature filled and stored (no thermal treatment in the container).	II, IV-B, VI-B	120° F., 24 hr.		
	III, IV-A	120° F., 24 hr.	70° F., 30 min.	
	V		70° F., 30 min.	
	VI-A			120° F., 24 hr.
F. Refrigerated storage (no thermal treatment in the container).	I, II, III, IV-A, IV-B, VI-B, VII	70° F., 48 hr.	70° F., 30 min.	
	VI-A			70° F., 48 hr.
G. Frozen storage (no thermal treatment in the container).	I, II, III, IV-B, VII	70° F., 24 hr.		

[1] Heptane extractant not applicable to closure-sealing gaskets overcoated with wax.

§ 121.2551 Corrosion inhibitors used for steel or tinplate.

Corrosion inhibitors may be safely used for steel or tinplate intended for use in, or to be fabricated as, food containers or food-processing or handling equipment, subject to the provisions of this section.

(a) The corrosion inhibitors are prepared from substances identified in this section and used subject to the limitations prescribed.

(b) The following corrosion inhibitors or adjuvants are used in amounts not to exceed those reasonably required to accomplish the intended physical or technical effect:

(1) Corrosion inhibitors (active ingredients) used in packaging materials for the packaging of steel or tinplate or articles fabricated therefrom:

List of substances	*Limitations*
Dicyclohexylamine and its salts of fatty acids derived from animal or vegetable oil.	
Dicyclohexylamine nitrite	
Morpholine and its salts of fatty acids derived from animal or vegetable oils.	

(2) Adjuvants employed in the application and use of corrosion inhibitors:

List of substances	*Limitations*
Polyethylene glycol	
Propylene glycol	

§ 121.2552 Synthetic glycerin.

Synthetic glycerin may be safely used as a component of articles intended for use in packaging materials for food, subject to the provisions of this section:

(a) It is produced by the hydrogenolysis of carbohydrates, and shall contain not in excess of 0.2 percent by weight of a mixture of butanetriols.

(b) It is used in a quantity not to exceed that amount reasonably required to produce its intended physical or technical effect, and in accordance with any limitations prescribed by applicable regulations in this Subpart F. It shall not be intended to, nor in fact accomplish, any direct physical or technical effect in the food itself.

§ 121.2553 Lubricants with incidental food contact.

Lubricants with incidental food contact may be safely used on machinery used for producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The lubricants are prepared from one or more of the following substances:

(1) Substances generally recognized as safe for use in food.

(2) Substances used in accordance with the provisions of a prior sanction or approval.

(3) Substances identified in this subparagraph.

Substances	*Limitations*
Aluminum stearoyl benzoyl hydroxide	For use only as a thickening agent in mineral oil lubricants at a level not to exceed 10 percent by weight of the mineral oil.
BHA	
BHT	
Castor oil	Addition to food not to exceed 10 parts per million.
Castor oil, dehydrated	Do.
Castor oil, partially dehydrated.	Do.
Dialkyldimethylammonium aluminum silicate where the alkyl groups are derived from hydrogenated tallow fatty acids (C_{14}–C_{18}) and where the aluminum silicate is derived from bentonite.	For use only as a gelling agent in mineral oil lubricants at a level not to exceed 7 percent by weight of the mineral oil.
Dimethylpolysiloxane (viscosity greater than 300 centistokes).	Addition to food not to exceed 1 part per million.
Fatty acids derived from animal or vegetable sources, and the hydrogenated forms of such fatty acids.	
12-Hydroxystearic acid	
Mineral oil	Addition to food not to exceed 10 parts per million.
Petrolatum	Complying with § 121.2588. Addition to food not to exceed 10 parts per million.
Phenyl-α-and/or phenyl-β-naphthylamine.	For use only, singly or in combination, as antioxidant in mineral oil lubricants at a level not to exceed a total of 1 percent by weight of the mineral oil.
Polybutene (minimum average molecular weight 80,000).	Addition to food not to exceed 10 parts per million.
Polyethylene	Do.
Polysorbate 60	Complying with § 121.1030. As a thickening and stabilizing agent, at a level not to exceed 2 percent by weight of lubricant.
Sodium nitrite	For use only as a rust preventive in mineral oil lubricants at a level not to exceed 3 percent by weight of the mineral oil.

(b) The lubricants are used on food-processing equipment as a protective antirust film, as a release agent on gaskets or seals of tank closures, and as a lubricant for machine parts and equipment in locations in which there is exposure of the lubricated part to food. The amount used is the minimum required to accomplish the desired technical effect on the equipment, and the addition to food of any constituent identified in this section does not exceed the limitations prescribed.

(c) Any substance employed in the production of the lubricants described in this section that is the subject of a regulation in this Subpart F conforms with any specifications in such regulation; and any substance that is not the subject of a regulation in this Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

§ 121.2554 Ethylene-ethyl acrylate copolymers

Ethylene-ethyl acrylate copolymers may be safely used to produce packaging materials, containers, and equipment intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) Ethylene-ethyl acrylate copolymers consist of basic resins produced by the catalytic copolymerization of ethylene and ethyl acrylate, to which may have been added certain optional substances to impart desired technological properties to the resin. Subject to any limitations prescribed in this section, the optional substances may include:

(1) Substances generally recognized as safe in food and food packaging.

(2) Substances the use of which is permitted under applicable regulations in this Part 121, prior sanction, or approvals.

(b) The ethyl acrylate content of the copolymer does not exceed 8 percent by weight unless it is blended with polyethylene complying with § 121.2510 or with one or more ethylene-alkene-1 copolymers complying with § 121.2508 or with a mixture of polyethylene and one or more ethylene-alkene-1 copolymers, in such proportions that the ethyl acrylate content of the blend does not exceed 8 percent by weight, or unless it is used in a coating complying with § 121.2514 or § 121.2526, in such proportions that the ethyl acrylate content does not exceed 8 percent by weight of the finished coating.

(c) Ethylene-ethyl acrylate copolymers or the blend shall conform to the specifications prescribed in subparagraph (1) of this paragraph and shall meet the ethyl acrylate content limits prescribed in paragraph (b) of this section, and the extractability limits prescribed in subparagraph (2) of this paragraph, when tested by the methods prescribed in § 121.2510.

(1) *Specifications*—(i) *Infrared identification.* Ethylene-ethyl acrylate copolymers can be identified by their characteristic infrared spectra.

(ii) *Quantitative determination of ethyl acrylate content.* The ethyl acrylate can be determined by the infrared spectra. Prepare a scan from 10.5 microns to 12.5 microns. Obtain a baseline absorbance at 11.6 microns and divide by the plaque thickness to obtain absorbance per mil. From a previously prepared calibration curve, obtain the amount of ethyl acrylate present.

(iii) *Specific gravity.* Ethylene-ethyl acrylate copolymers have a specific gravity of not less than 0.920 nor more than 0.935, as determined by A.S.T.M. Method D-1505.

(2) *Limitations.* (i) Ethylene-ethyl acrylate copolymers or the blend may be used in contact with food except as a component of articles used for packaging or holding food during cooking, provided they meet the following extractability limits:

(*a*) Maximum soluble fraction of 11.3 percent in xylene after refluxing and subsequent cooling to 25° C.

(*b*) Maximum extractable fraction of 3.1 percent when extracted with ethyl acetate at 50° C.

(*c*) Maximum extractable fraction of 5.5 percent when extracted with *n*-hexane at 50° C.

(d) The provisions of paragraphs (b) and (c)(2) of this section are not applicable to ethylene-ethyl acrylate copolymers used in the formulation of adhesives complying with § 121.2520.

§ 121.2555 Perfluorocarbon resins.

Perfluorocarbon resins may be safely used as articles or components of articles used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) Perfluorocarbon resins are produced by the homopolymerization and/or copolymerization of hexafluoropropylene and tetrafluoroethylene, to which may have been added certain optional substances to impart desired technological properties to the resins. Subject to any limitations prescribed in this section, the optional substances may include:

(1) Substances generally recognized as safe in food and food packaging.

(2) Substances the use of which is permitted under applicable regulations in this part, prior sanctions, or approvals.

(b) Perfluorocarbon resins shall conform to the specifications prescribed in subparagraph (1) of this paragraph and shall meet the extractability limits prescribed in subparagraph (2) of this paragraph.

(1) *Specifications*—(i) *Infrared identification.* Perfluorocarbon resins can be identified by their characteristic infrared spectra.

(ii) *Melt viscosity.* Perfluorocarbon resins have a melt viscosity of not less than 10^4 poises at 380° C. as determined by American Society for Testing Materials Method D-1238-57T. Melt viscosity of the copolymers shall not vary more than 50 percent within ½-hour at 380° C.

(iii) *Thermal instability index.* The thermal instability index of the tetrafluoroethylene homopolymer shall not exceed 50 as determined by American Society for Testing Materials Method D-1457-56T.

(2) *Limitations.* Perfluorocarbon resins when extracted at reflux temperatures for 2 hours separately with distilled water, 50 percent ethanol in water, *n*-heptane, and ethyl acetate shall meet the following extractability limits:

(i) Total extractives not to exceed 0.2 milligram per square inch.

(ii) Fluoride extractives calculated as fluorine not to exceed 0.03 milligram per square inch.

§ 121.2556 Preservatives for wood.

Preservatives may be safely used on wooden articles that are used or intended for use in packaging, transporting, or holding raw agricultural products subject to the provisions of this section:

(a) The preservatives are prepared from substances identified in paragraph (b) of this section and applied in amounts not to exceed those necessary to accomplish the technical effect of protecting the wood from decay, mildew, and water absorption.

(b) The substances permitted are as follows:

List of substances	*Limitations*
Copper-8-quinolinolate	
Mineral spirits	
Paraffin wax	Not to exceed 50 p.p.m. in the treated wood, calculated as pentachlorophenol.
Petroleum hydrocarbon resin, produced by the homo- and copolymerization of dienes and olefins of the aliphatic, alicyclic, and monobenzenoid arylalkene type from distillates of cracked petroleum stocks.	Used singly or in combination so as to constitute not less than 50% of the solids.
Pentachlorophenol and its sodium salt	
Rosins and rosin derivatives	As provided in § 121.2592.
Zinc salt of sulfonated petroleum	

§ 121.2557 Defoaming agents used in coatings.

The defoaming agents described in this section may be safely used as components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The defoaming agents are prepared as mixtures of substances described in paragraph (d) of this section.

(b) The quantity of any substance employed in the formulation of defoaming agents does not exceed the amount reasonably required to accomplish the intended physical or technical effect in the defoaming agents or any limitation further provided.

(c) Any substance employed in the production of defoaming agents and which is the subject of a regulation in this Subpart F conforms with any specifications in such regulation; and any substance that is not the subject of a regulation in this Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(d) Substances employed in the formulation of defoaming agents include:

(1) Substances generally recognized as safe in food.

(2) Substances subject to prior sanction or approval for use in defoaming agents and used in accordance with such sanction or approval.

(3) Substances identified in this subparagraph and subject to such limitations as are provided:

List of substances	Limitations
n-Butyl alcohol.	
tert-Butyl alcohol.	
Butyl stearate.	
Castor oil, sulfated, ammonium, potassium, or sodium salt.	
Cetyl alcohol.	
Cyclohexane.	
Cyclohexanol.	
Diethylene glycol monolaurate.	
Diethylene glycol monostearate.	
Dimers and trimers of unsaturated C_{18} fatty acids derived from:	For use only at levels not to exceed 0.1% by weight of total coating solids.
Animal and vegetable fats and oils.	
Tall oil.	
Dimethylpolysiloxane.	
Dipropylene glycol.	
Ethyl alcohol.	
Fats and oils derived from animal or vegetable sources.	
Fatty acids derived from animal or vegetable fats and oils, and salts of such acids, single or mixed, as follows:	
Aluminum.	
Ammonium.	
Calcium.	
Magnesium.	
Potassium.	
Sodium.	
Zinc.	
Formaldehyde.	For use as preservative of defoamer only.
Glyceryl mono-12-hydroxystearate.	
Glyceryl monostearate.	
Hexane.	
Hexylene glycol (2-methyl-2,4-pentanediol).	
Isobutyl alcohol.	
Isopropyl alcohol.	
Kerosene.	
Lecithin hydroxylated.	
Methyl alcohol.	
Methylcellulose.	
Methyl esters of fatty acids derived from animal or vegetable fats and oils.	
Methyl oleate.	
Methyl palmitate.	
Mineral oil.	
Mustardseed oil, sulfated, ammonium, potassium, or sodium salt.	
Myristyl alcohol.	
Naphtha.	
β-Naphthol.	For use as preservative of defoamer only.
Nonyl phenol.	
Odorless light petroleum hydrocarbons.	As defined in § 121.2594.
Oleic acid, sulfated, ammonium, potassium, or sodium salt.	
Parachlorometacresol.	For use as preservative of defoamer only.
Peanut oil, sulfated, ammonium, potassium, or sodium salt.	
Petrolatum.	
Pine oil.	
Polyethylene.	
Polyethylene, oxidized.	
Polyethylene glycol (200) dilaurate.	
Polyethylene glycol (400) dioleate.	
Polyethylene glycol (600) dioleate.	
Polyethylene glycol (400) esters of coconut oil fatty acids.	
Polyethylene glycol (400) monooleate.	
Polyethylene glycol (600) monooleate.	
Polyethylene glycol (600) monoricinoleate.	
Polyethylene glycol (400) monostearate.	
Polyoxybutylene-polyoxypropylene-polyoxyethylene glycol (min. mol. wt. 3700).	
Polyoxyethylated (min. 3 mols) cetyl alcohol.	
Polyoxyethylated (min. 5 mols) oleyl alcohol.	
Polyoxyethylated (min. 1.5 mols) tridecyl alcohol.	
Polyoxyethylene (min. 15 mols) ester of rosin.	
Polyoxyethylene (min. 8 mols) monooleate.	
Polyoxyethylene (20) sorbitan monolaurate.	
Polyoxyethylene (20) sorbitan tristearate.	
Polyoxyethylene (40) stearate.	
Polyoxypropylated (min. 20 mols) butyl alcohol.	
Polyoxypropylene glycol (min. mol. wt. 200).	
Polyoxypropylene (min. 20 mols) oleate butyl ether.	
Polyoxypropylene-polyoxyethylene glycol (min. mol. wt. 1,900).	
Polyoxypropylene (min. 40 mols) stearate butyl ether.	
Polysorbate 60 conforming to the identity prescribed in § 121.1030.	
Polysorbate 80.	
Potassium pentachlorophenate.	For use as preservative of defoamer only.
Potassium trichlorophenate.	For use as preservative of defoamer only.
Propylene glycol monoester of soybean oil fatty acids.	
Propylene glycol monoester of tallow fatty acids.	
Ricebran oil, sulfated, ammonium, potassium, or sodium salt.	
Rosins and rosin derivatives.	As provided in § 121.2592.
Silica.	
Sodium 2-mercaptobenzothiazole.	For use as preservative of defoamer only.
Sodium pentachlorophenate.	For use as preservative of defoamer only.
Sodium trichlorophenate.	For use as preservative of defoamer only.
Sorbitan monostearate.	
Sorbitan tristearate.	
Sperm oil, sulfated, ammonium, potassium, or sodium salt.	
Stearyl alcohol.	
Tall oil fatty acids.	
Tallow fatty acids, hydrogenated or sulfated.	
Tallow, sulfated, ammonium, potassium, or sodium salt.	
Triethanolamine.	
Triisopropanolamine.	
Waxes, petroleum.	

(e) The defoaming agents are used as follows:

(1) The quantity of defoaming agent or agents used shall not exceed the amount reasonably required to accomplish the intended effect, which is to prevent or control the formation of foam.

(2) The defoaming agents are used in the preparation and application of coatings for paper and paperboard.

§ 121.2558 Isoparaffinic petroleum hydrocarbons, synthetic.

Isoparaffinic petroleum hydrocarbons, synthetic, may be safely used in the production of nonfood articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The isoparaffinic petroleum hydrocarbons, produced by synthesis from petroleum gases, consist of a mixture of liquid hydrocarbons meeting the following specifications:

Boiling point 145°–500° F., as determined by A.S.T.M. Method D–86.

Ultraviolet absorbance:
260–319 millimicrons—1.5 maximum.
320–329 millimicrons—0.08 maximum.
330–350 millimicrons—0.05 maximum.

Nonvolatile residue 0.002 gram per 100 milliliters maximum.

Synthetic isoparaffinic petroleum hydrocarbons containing antioxidants shall meet the specified ultraviolet absorbance limits after correction for any absorbance due to the antioxidants. The ultraviolet absorbance shall be determined by the procedure described for application to mineral oil under "Specifications" on page 66 of the Journal of the Association of Official Agricultural Chemists, Vol. 45 (February 1962), disregarding the last sentence of that procedure. For hydrocarbons boiling below 250° F., the nonvolatile residue shall be determined by A.S.T.M. procedure D–1353; for those boiling above 250° F., A.S.T.M. procedure D–381 shall be used.

(b) Isoparaffinic petroleum hydrocarbons may contain antioxidants authorized for use in food in an amount not to exceed that reasonably required to accomplish the intended technical effect.

(c) Isoparaffinic petroleum hydrocarbons are used in the production of nonfood articles. The quantity used shall not exceed the amount reasonably required to acomplish the intended technical effect, and the residual remaining in the finished article shall be the minimum amount reasonably attainable.

§ 121.2559 Xylene-formaldehyde resins condensed with 4,4′-isopropylidenediphenol-epichlorohydrin epoxy resins.

The resins identified in paragraph (a) of this section may be safely used as a food-contact coating for articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food only of the types identified in § 121.2526(c), table 1, under categories I, II, VI, and VIII, and only at temperatures not to exceed room temperature, in accordance with the following prescribed conditions.

(a) The resins are produced by the condensation of xylene-formaldehyde resins and 4,4′-isopropylidenediphenol-epichlorohydrin epoxy resins, to which may have been added certain optional adjuvant substances required in the production of the resins or added to impart desired physical and technical properties. The optional adjuvant substances may include substances identified in § 121.2514(b)(3), with the exception of paragraph (b)(3)(xxxi) and (xxxii) of that section.

(b) The coating in the finished form in which it is to contact food shall meet the following extractives limitations when tested by the methods provided in § 121.2514(e):

(1) The coating when extracted with distilled water at 180° F. for 24 hours shall yield total extractives not to exceed 0.05 milligram per square inch of food-contact surface.

(2) The coating when extracted with 50 percent (by volume) ethyl alcohol in distilled water at 180° F. for 24 hours shall yield total extractives not to exceed 0.05 milligram per square inch of food-contact surface.

§ 121.2560 Poly-1,4,7,10,13-pentaaza-15-hydroxyhexadecane.

Poly-1,4,7,10,13-pentaaza-15-hydroxyhexadecane may be safely used as a retention aid employed prior to the sheet-forming operation in the manufacture of paper and paperboard intended for use in contact with food in an amount not to exceed that necessary to accomplish the intended physical or technical effect and not to exceed 6 pounds per ton of finished paper or paperboard.

§ 121.2561 Esters of stearic and palmitic acids.

The ester stearyl palmitate or palmityl stearate or mixtures thereof may be safely used as adjuvants in food-packaging materials when used in accordance with the following prescribed conditions:

(a) They are used or intended for use as plasticizers or lubricants in polystyrene intended for use in contact with food.

(b) They are added to the formulated polymer prior to extrusion.

(c) The quantity used shall not exceed that required to accomplish the intended technical effect.

§ 121.2562 Rubber articles intended for repeated use.

Rubber articles intended for repeated use may be safely used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The rubber articles are prepared from natural and/or synthetic polymers and adjuvant substances as described in paragraph (c) of this section.

(b) The quantity of any substance employed in the production of rubber articles intended for repeated use shall not exceed the amount reasonably required to accomplish the intended effect in the rubber article and shall not be intended to accomplish any effect in food.

(c) Substances employed in the preparation of rubber articles include the following, subject to any limitations prescribed:

(1) Substances generally recognized as safe for use in food or food packaging.

(2) Substances used in accordance with the provisions of a prior sanction or approval.

(3) Substances that by regulation in this Part 121 may be safely used in rubber articles, subject to the provisions of such regulation.

(4) Substances identified in this subparagraph: *Provided, however*, That any substance that is the subject of a regulation in this Subpart F conforms with any specifications in such regulation; any substance that is not the subject of a regulation in this Subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

(i) *Elastomers.*

Acrylonitrile-butadiene copolymer.
Butadiene-acrylonitrile-ethylene glycol dimethacrylate copolymers containing not more than 5 weight percent of polymer units derived from ethylene glycol dimethacrylate.
Butadiene-acrylonitrile-methacrylic acid copolymer.
Butadiene-styrene-methacrylic acid copolymer.
Chloroprene polymers.
Chlorotrifluoroethylene-vinylidene fluoride copolymer.
Ethylene-propylene-dicyclopentadiene copolymer.
Isobutylene-isoprene copolymer.
Polybutadiene.
Polyisoprene.
Rubber, natural.
Silicone basic polymers as described in ASTM D-1418-61T:
  Silicone (Si) elastomers containing methyl groups.
  Silicone (Psi) elastomers containing methyl and phenyl groups.
  Silicone (Vsi) elastomers containing methyl and vinyl groups.
  Silicone (Fsi) elastomers containing methyl and fluorine groups.
  Silicone (PVsi) elastomers containing phenyl, methyl, and vinyl groups.
Styrene-butadiene copolymer.

(ii) *Vulcanization materials*—(*a*) *Vulcanizing agent.* Sulfur, ground.

(*b*) *Accelerators* (*total not to exceed 1.5 percent by weight of rubber product*).

2-Benzothiazyl - *N,N*-diethylthiocarbamylsulfide.
Benzoyl peroxide.
1,3 - Bis(2-benzothiazolylmercaptomethyl) urea.
N-tert-Butyl-2-benzothiazole sulfenamide.
Butyraldehyde-aniline resin (iodine number 670–705).
Carbon disulfide - 1,1′ - methylenedipiperidine reaction product.
Copper dimethyldithiocarbamate.
N-Cyclohexyl-2-benzothiazole sulfenamide.
Dibenzoyl-*p*-quinone dioxime.
Dibenzylamine.
Di-*tert*-butyl peroxide.
Dibutyl xanthogen disulfide.
2,4-Dichlorobenzoyl peroxide.
Dicumyl peroxide.
N,N-Dimethylcyclohexylamine salt of dibutyldithiocarbamic acid.
2,6-Dimethylmorpholine thiobenzothiazole.
Dipentamethylenethiuram tetrasulfide.
Diphenylguanidine.
Diphenylguanidine phthalate.
1,3-Diphenyl-2-thiourea.
2,2′-Dithiobis[benzothiazole].
4,4′-Dithiodimorpholine.
N,N′-Di-*o*-tolylguanidine.
Di-*o*-tolylguanidine salt of pyrocatechol borate.
Ethylenediamine carbamate.
Heptaldehyde-aniline resin (iodine number 430–445).
Hexamethylenetetramine.
2-Mercaptobenzothiazole.
2-Mercaptoimidazoline.
2-Mercaptothiazoline.
N-Oxydiethylene - benzothiazole-2-sulfenamide.
Piperidinium pentamethylenedithiocarbamate.
Potassium pentamethylenedithiocarbamate.
p-Quinone dioxime.
Sodium dibutyldithiocarbamate.
Sodium dimethyldithiocarbamate.
Tetrabutylthiuram monosulfide.
Tetraethylthiuram disulfide.
Tetramethylthiuram monosulfide.
Thiram (tetramethylthiuram disulfide).
Triethylenetetramine.
1,3,5-Triethyl-hexahydro-*s*-triazine (triethyltrimethylenetriamine).
Triphenylguanidine.
Zinc butyl xanathate.
Zinc dibenzyl dithiocarbamate.
Zinc dibutyldithiocarbamate.
Zinc diethyldithiocarbamate.
Zinc 2-mercaptobenzothiazole.
Ziram (zinc dimethyldithiocarbamate).

(*c*) *Retarders* (*total not to exceed 10 percent by weight of rubber product*).

Cyanoguanidine.
Phthalic anhydride.
Salicylic acid.

(*d*) *Activators* (*total not to exceed 5 percent by weight of rubber product*).

Diethylamine.
Fatty acid amines, mixed.
Fatty acids.
Magnesium carbonate.
Magnesium oxide, light and heavy.
Oleic acid, dibutylamine salt (dibutylammonium oleate).
Stannous chloride.
Tall oil fatty acids.
Tetrachloro-*p*-benzoquinone.
Triethanolamine.
Zinc salts of fatty acids.

(iii) *Antioxidants and antiozonants* (*total not to exceed 5 percent by weight of rubber product*).

Aldol-α-naphthylamine.
Alkylated (C_4 and/or C_8) phenols.
N - Alkyl(C_{12}–C_{18}) - 1,3 - propanediamine-*N,N′,N′*-triacetic acid.
BHT (butylated hydroxytoluene).
Butylated, styrenated cresols.
4,4′-Butylidinebis(6-*tert*-butyl-*m*-cresol).
N-Cyclohexyl-*N′*-phenylphenylenediamine.
p,p′-Diaminodiphenylmethane.
2,5-Di-*tert*-amylhydroquinone.
Diaryl-*p*-phenylenediamine, where the aryl group may be phenyl, tolyl, or xylyl.
2,2′-Di - *tert* - butyl - 4,4′ - isopropylidenediphenol bis(*p*-nonylphenyl) phosphite.
2,6-Di-*tert*-butyl-*p*-phenylphenol.
1,2-Dihydro-2,2,4 - trimethyl - 6 - dodecylquinoline.
1,2-Dihydro-2,2,4 - trimethyl - 6 - ethoxyquinoline.
1,2-Dihydro - 2,2,4 - trimethylquinoline, polymerized.
1,2-Dihydro-2,2,4-trimethyl - 6 - phenylquinoline.
4,4′-Dimethoxydiphenylamine.
4,6-Dinonyl-*o*-cresol.
N,N′-Dioctyl-*p*-phenylenediamine.
Diphenylamine-acetone resin.
Diphenylamine - acetone - formaldehyde resin.
N,N′-Diphenylethylenediamine.
N,N′-Disalicylalpropylenediamine.
N,N′-Di-*o*-tolylethylenediamine.
Hydroquinone monobenzyl ether.
Isopropoxydiphenylamine.
N - Isopropyl - *N′* - phenyl - *p* - phenylenediamine.
2,2′ - Methylenebis(6 - *tert* - butyl-4-ethylphenol).
2,2′ - Methylenebis(4 - methyl - 6 - *tert* - butylphenol).
2,2′-Methylenebis(4-methyl - 6 - nonylphenol).
Monooctyl- and dioctyldiphenylamine.
N,N′-Di-β-naphthyl-*p*-phenylenediamine.
Phenyl-α-naphthylamine.
Phenyl-β-naphthylamine.
Phenyl-β-naphthylamine-acetone aromatic amine resin (average molecular weight 600; nitrogen content 5.3 percent).
o- and *p*-Phenylphenol.
Polybutylated (mixture) 4,4′-isopropylidenediphenol.
Sodium pentachlorophenate.
Styrenated phenol.
4,4′-Thiobis (6-*tert*-butyl-*m*-cresol).
Toluene-2,4-diamine.
N-*o*-Tolyl-*N′*-phenyl-*p*-phenylenediamine.
p(*p*-Tolylsulfanilamide) diphenylamine.
Tri(mixed mono- and dinonylphenyl) phosphite.

(iv) *Plasticizers (total not to exceed 30 percent by weight of rubber product).*

n-Amyl *n*-decyl phthalate.
Butylacetyl ricinoleate.
Butyl laurate.
Butyl oleate.
Butyl stearate.
Calcium stearate.
Castor oil.
Coumarone-indene resins.
Dibenzyl adipate.
Dibutoxyethoxyethyl adipate.
Dibutyl phthalate.
Dibutyl sebacate.
Didecyl adipate.
Didecyl phthalate.
Diisodecyl adipate.
Diisodecyl phthalate.
Diisooctyl adipate.
Diisooctyl sebacate.
Dioctyl adipate.
Dioctyl phthalate.
Dioctyl sebacate.
Dipentene resin.
Diphenyl ketone.
Fatty acids.
Fatty acids, hydrogenated.
Lanolin.
α-Methylstyrene-vinyl toluene copolymer.
Mineral oil.
Montan wax.
n-Octyl *n*-decyl adipate.
n-Octyl *n*-decyl phthalate.
Petrolatum.
Petroleum hydrocarbon resin (cyclopentadiene type), hydrogenated.
Petroleum hydrocarbon resin (produced by the homo- and copolymerization of dienes and olefins of the aliphatic, alicyclic, and monobenzenoid arylalkene types from distillates of cracked petroleum stocks).
Petroleum oil, sulfonated.
Phenol-formaldehyde resin.
Pine tar.
Polybutene.
Polystyrene.
Propylene glycol.
Rapeseed oil vulcanized with rubber maker's sulfur.
Rosins and rosin derivatives identified in § 121.2520(c)(5).
Soybean oil vulcanized with rubber makers' sulfur.
Styrene-acrylonitrile copolymer.
Terpene resins.
Triethylene glycol dicaprate.
Triethylene glycol dicaprylate.
Waxes, petroleum.
Xylene (or toluene) alkylated with dicyclopentadiene.

(v) *Fillers.*

Aluminum hydroxide.
Aluminum silicate.
Asbestos fiber, chrysotile or crocidolite.
Barium sulfate.
Carbon black (channel process or furnace combustion process; total carbon black not to exceed 50 percent by weight of rubber product; furnace combustion black content not to exceed 10 percent by weight of rubber products intended for use in contact with milk or edible oils).
Cork.
Cotton (floc, fibers, fabric).
Mica.
Nylon (floc, fibers, fabric).
Silica.
Titanium dioxide.
Zinc carbonate.
Zinc sulfide.

(vi) *Colors (total not to exceed 10 percent by weight of rubber product).*

Chrome oxide (Cr_2O_3).
Copper phthalocyanine.
Iron oxide.
Phthalocyanine.
Pigment red 38, Color Index No. 21120 (1956).
Titanium dioxide.
Ultramarine blue.
Zinc chromate.

(vii) *Lubricants (total not to exceed 2 percent by weight of rubber product).*

Polyethylene.
Sodium stearate.

(viii) *Emulsifiers.*

Fatty acid salts, sodium or potassium.
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt.
Rosins and rosin derivatives identified in § 121.2520(c)(5).
Sodium decylbenzenesulfonate.
Sodium dodecylbenzenesulfonate.
Sodium lauryl sulfate.
Tall oil mixed soap (calcium, potassium, and sodium).

(ix) *Miscellaneous (total not to exceed 5 percent by weight of rubber product).*

Animal glue as described in § 121.2534.
Azodicarbonamide as chemical blowing agent.
2-Anthraquinone sulfonic acid sodium salt for use only as polymerization inhibitor in chloroprene polymers and not to exceed 0.03 percent by weight of the chloroprene polymers.
n-Butyllithium for use only as polymerization catalyst for polybutadiene.
4-*tert*-Butyl-*o*-thiocresol as peptizing agent.
tert-Butyl peracetate.
p-*tert*-Butylpyrocatechol.
Dialkyl(C_8–C_{18})dimethylammonium chloride for use only as a flocculating agent in the manufacture of silica.
Di- and triethanolamine.
Dodecyl mercaptan isomers, single or mixed.
2-Ethoxyethanol.
Iodoform.
Polyethylene glycol (molecular weight 6,000).
p-Menthane hydroperoxide.
4,4'-Oxybis(benzenesulfonhydrazide) as chemical blowing agent.
Phenothiazine.
Potassium persulfate.
Sodium formaldehyde sulfoxylate.
Sodium polysulfide.
Sodium nitrite.
Sodium salt of ethylenediamine tetraacetic acid and glycine.
Sodium sulfide.
Styrene monomer.
Tall oil.
Thioxylenols as peptizing agents.
Zinc 4-*tert*-butylthiophenate as peptizing agent.

(d) Rubber articles intended for use with dry food are so formulated and cured under conditions of good manufacturing practice as to be suitable for repeated use.

(e) Rubber articles intended for repeated use in contact with aqueous food shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with distilled water at reflux temperature, shall yield total extractives not to exceed 20 milligrams per square inch during the first 7 hours of extraction, nor to exceed 1 milligram per square inch during the succeeding 2 hours of extraction.

(f) Rubber articles intended for repeated use in contact with fatty foods shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with *n*-hexane at reflux temperature, shall yield total extractives not to exceed 175 milligrams per square inch during the first 7 hours of extraction, nor to exceed 4 milligrams per square inch during the succeeding 2 hours of extraction.

§ 121.2563 Ultramarine blue.

Ultramarine blue may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) It is used as a colorant in the manufacture of the following articles:

(1) Flexible, semirigid, and rigid plastic materials.

(2) Textiles and textile fibers as provided in § 121.2535.

(b) The quantity used shall not exceed the amount reasonably required to accomplish the intended effect.

§ 121.2564 [Reserved]

§ 121.2565 Chromic chloride complexes.

Myristo chromic chloride complex and stearato chromic chloride complex may be safely used as release agents in the closure area of packaging containers intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The quantity used shall not exceed that reasonably required to accomplish the intended technical effect nor exceed 7 micrograms of chromium per square inch of closure area.

(b) The packaging container which has its closure area treated with the release agent shall have a capacity of not less than 120 grams of food per square inch of such treated closure area.

§ 121.2566 Antioxidants and/or stabilizers for polymers.

The substances listed in paragraph (b) of this section may be safely used as antioxidants and/or stabilizers in polymers used in the manufacture of articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section:

(a) The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect.

(b) List of substances:

	Limitations
2,6-Bis(1-methylheptadecyl)-p-cresol.	For use only at levels not to exceed 0.3 percent by weight of polymers complying with §§ 121.2501, 121.2508, and 121.2510: *Provided*, That the finished polymers contact food only of the types identified in § 121.2526(c), table 1 under categories I, II, IV-B, VI, and VIII.
4,4'-Butylidenebis(6-*tert*-butyl-m-cresol).	For use only: 1. As provided in §§ 121.2520 and 121.2562. 2. At levels not to exceed 0.5% by weight of polypropylene complying with § 121.2501 and for use t levels not to exceed 0.3% by weight of polyethylene complying with § 121.2510, provided that the finished polypropylene and polyethylene contact food only of the types identified in § 121.2526(c), table 1, under categories I, II, VI-B, and VIII.
Calcium benzoate	
Calcium stearate	
4,4'-Cyclohexylidenebis(2-cyclohexylphenol).	For use only at levels not to exceed 0.1 percent by weight of olefin polymers complying with §§ 121.2501, 121.2508, and 121.2510; *Provided*, That the finished polymers contact food only of the types identified in § 121.2526(c), table 1, under categories I, II, IV-B, VI, VII-B, and VIII.
N,N'-Diphenylthiourea.	For use only: At levels not to exceed 0.5 percent by weight of polyvinyl chloride; or At levels not to exceed 0.5 percent by weight of vinyl chloride-vinyl acetate copolymers containing not more than 20 molar percent of vinyl acetate.
Magnesium salicylate	For use only in rigid polyvinyl chloride provided that total salicylates (calculated as the acid) do not exceed 0.3 percent by weight of the polymer.
4,4' Methylenebis (2,6-di-*tert*-butylphenol).	For use only: 1. As provided in § 121.2520. 2. At levels not to exceed 0.25 percent by weight of petroleum hydrocarbon resins used in compliance with regulations in this Subpart F. 3. At levels not to exceed 0.25 percent by weight of terpene resins used in compliance with regulations in this Subpart F. 4. At levels not to exceed 0.5 percent by weight of polyethylene complying with § 121.2510, provided that the polyethylene end product contacts foods only of the types identified in categories I, II, IV-B, VI, VII-B, and VIII in table 1, § 121.2526(c). 5. At levels not to exceed 0.5 percent by weight of polybutadiene used in rubber articles complying with § 121.2562, provided that the rubber end product contacts foods only of the types identified in categories I, II, IV-B, VI, VII-B, and VIII in table 1, § 121.2526(c).
2,2'-Methylenebis[6-(1-methylcyclohexyl)-p-cresol].	For use only: 1. As provided in § 121.2550. 2. At levels not to exceed 0.2% by weight of polyethylene complying with § 121.2510, provided that the finished polyethylene contacts foods only of the type identified in § 121.2526(c), table 1, under categories I, II, VI-B, and VIII.
2,2'—Continued	For use only—Continued 3. In polyethylene complying with § 121.2510, provided that the finished polyethylene contacts foods only of the types identified in § 121.2526 (c), table 1, under categories III, IV, V, VI-A, VII, and IX, and only at temperatures not to exceed room temperature and further provided that percentage concentration of the antioxidant in the polyethylene, when multiplied by the thickness in inches of the finished polyethylene, shall not be greater than 0.0005
Pentaerythritol and its stearate ester.	For use only in rigid polyvinyl chloride provided that the total amount of pentaerythritol and/or pentaerythritol stearate (calculated as free pentaerythritol) does not exceed 0.4 percent by weight of the polymer.
Sorbitan monostearate.	Conforming to the identity prescribed in § 121.1029.
4,4'-Thiobis(6-*tert*-butyl-m-cresol).	For use only: 1. As provided in §§ 121.2520 and 121.2562. 2. At levels not to exceed 0.25% by weight of polyethylene complying with § 121.2510, provided that the specific gravity of the polyethylene is not less than 0.926 and further provided that the finished polyethylene contacts food only of the types identified in § 121.2526(c), table 1 under categories I, II, VI-B, and VIII.
Thiodipropionic acid.	
1,3,5-Trimethyl-2,4,6-tris (3,5-di-*tert*-butyl-4-hydroxybenzyl) benzene.	For use only: 1. At levels not to exceed 0.5 percent by weight of polymers except nylon resins identified in § 121.2502. 2. At levels not to exceed 1 percent by weight of nylon resins identified in § 121.2502.
Tri(mixed mono- and dinonylphenyl) phosphite (which may contain not more than 1% by weight of triisopropanolamine).	
Tris(2-methyl-4-hydroxy-5-*tert*-butylphenyl) butane.	For use only: 1. At levels not to exceed 0.25 percent by weight of polymers used as provided in § 121.2571. 2. At levels not to exceed 0.25 percent by weight of olefin and/or vinyl chloride polymers used in articles that contact food of the types identified in § 121.2526(c), table 1, under types I, II, IV-B, VI-B, VII-B, and VIII. 3. At levels not to exceed 0.1 percent by weight of olefin and/or vinyl chloride polymers used in articles that contact food of the types identified in § 121.2526(c), table 1, under types III, IV-A, V, VI-A, VI-C, VII-A, and IX: *Provided*, That such articles are not used for packing or holding food during cooking.
Zinc salicylate	For use only in rigid polyvinyl chloride provided that total salicylates (calculated as the acid) do not exceed 0.3 percent by weight of the polymer.
Zinc stearate	

§ 121.2567 Water-insoluble hydroxyethyl cellulose film.

Water-insoluble hydroxyethyl cellulose film may be safely used for packaging food in accordance with the following prescribed conditions:

(a) Water-insoluble hydroxyethyl cellulose film consists of a base sheet manufactured by the ethoxylation of cellulose under controlled conditions, to which may be added certain optional substances of a grade of purity suitable for use in food packaging as constituents of the base sheet or as coatings applied to impart desired technological properties.

(b) Subject to any limitations prescribed in this Part 121, the optional substances used in the base sheet and coating may include:

(1) Substances generally recognized as safe in food.

(2) Substances permitted to be used in water-insoluble hydroxyethyl cellulose film by prior sanction or approval and under conditions specified in such sanctions or approval, and substances listed in § 121.2001.

(3) Substances that by any regulation promulgated under section 409 of the act may be safely used as components of water-insoluble hydroxyethyl cellulose film.

(4) Substances identified in and used in compliance with § 121.2507(c).

(c) Any substance employed in the production of the water-insoluble hydroxyethyl cellulose film described in this section that is the subject of a regulation in this subpart F conforms with any specifications in such regulation; and any substance that is not the subject of a regulation in this subpart F conforms with the specifications, if any, prescribed by an order extending the effective date of the statute for such substance as an indirect additive to food.

§ 121.2568 Guar gum, modified.

Guar gum that has been modified by treatment with β-diethylaminoethyl chloride hydrochloride may be safely used as a retention aid and/or drainage aid employed prior to the sheet-forming operation in the manufacture of paper and paperboard intended for use in contact with food.

§ 121.2569 Resinous and polymeric coatings for polyolefin films.

Resinous and polymeric coatings may be safely used as the food-contact surface of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) The coating is applied as a continuous film over one or both sides of a base film produced from polypropylene as defined in § 121.2501, polyethylene as defined in § 121.2510, or ethylene-alkene-1 copolymers as defined in § 121.2508.

(b) The coatings are formulated from optional substances which are:

(1) Substances generally recognized as safe for use in or on food.

(2) Substances the use of which is permitted under applicable regulations in this part, by prior sanctions, or approvals.

(3) Substances identified in this subparagraph and subject to such limitations as are provided:

List of substances	*Limitations*
(i) Resins and polymers:	
Acrylic acid polymer and its ethyl or methyl esters.	
Acrylamide copolymerized with ethyl acrylate and/or styrene and/or methacrylic acid, and the copolymer subsequently reacted with formaldehyde and butanol.	
Butadiene-acrylonitrile copolymer.	
Butadiene-acrylonitrile-styrene terpolymer.	
Butyl rubber	
2-Ethylhexyl acrylate copolymerized with one or more of the following:	
Acrylonitrile	
Itaconic acid	
Methacrylonitrile	
Methyl acrylate	
Methyl methacrylate	
Melamine-formaldehyde as the basic polymer or chemically modified with methyl alcohol.	
Methacrylic acid and its ethyl or methyl esters copolymerized with one or more of the following:	
Acrylic acid	
Ethyl acrylate	
Methyl acrylate	
α-Methyl styrene polymer.	
Polyamide resins, derived from dimerized vegetable oil acids (containing not more than 20% of monomer acids) and ethylenediamine, as the basic resin.	For use only in coatings for polyolefin films that contact food at temperatures not to exceed room temperature.
Polyester resins formed by reaction of one or more of the following polybasic acids and monobasic acids with one or more of the following polyhydric alcohols:	
Polybasic acids:	
Adipic	
Dimerized fatty acids derived from:	
Animal, marine, or vegetable fats and oils.	
Tall oil	
Fumaric	
Isophthalic	
Maleic	
o-Phthalic	
Sebacic	
Terephthalic	
Trimellitic	
Monobasic acids:	
Fatty acids derived from:	
Animal, marine, or vegetable fats and oils.	
Tall oil	
Polyhydric alcohols:	
1,3-Butylene glycol.	
Diethylene glycol	
Dipropylene glycol	
Ethylene glycol	
Glycerol	
Mannitol	
α-Methyl glucoside.	
Pentaerythritol	
Propylene glycol	
Sorbitol	
Trimethylol ethane.	
Trimethylol propane.	
Polystyrene	
Polyvinyl acetate	
Polyvinyl chloride	
Styrene copolymerized with one or more of the following:	
Acrylonitrile.	
α-Methyl styrene.	
Styrene-isobutylene copolymer.	
Vinyl chloride-acetate, hydroxyl-modified copolymer or maleic acid-modified copolymer.	
Vinyl chloride copolymerized with one or more of the following:	
Acrylonitrile.	
Vinyl acetate.	
Vinylidene chloride.	
Vinylidene chloride copolymerized with one or more of the following:	
Acrylic acid and its methyl, ethyl, propyl, butyl, or octyl esters.	
Acrylonitrile.	
Itaconic acid.	
Methacrylic acid and its methyl, ethyl, propyl, butyl, or octyl esters.	
Methacrylonitrile.	
Vinyl chloride.	
(ii) Plasticizers:	
Acetyl tributyl citrate	
Acetyl triethyl citrate	
Butyl phthalyl butyl glycolate	
Butyl stearate	
Dibutyl sebacate	
Diethyl phthalate	
2-Ethylhexyl diphenyl phosphate	
Ethyl phthalyl ethyl glycolate	
Glycerol monooleate	
Glycerol triacetate	
Triethyl citrate	
(iii) Adjuvants (release agents, waxes, and dispersants):	
Acetone	
Amides (unsubstituted) of fatty acids from vegetable or animal oils.	
n-Butyl acetate	
n-Butyl alcohol	
Candelilla wax	
Carnauba wax	
Ethyl acetate	
Fatty acids from vegetable or animal oils and their aluminum, ammonium, calcium, magnesium, and sodium salts.	
Hexane	
Methyl ethyl ketone	
Petroleum waxes conforming to specifications included in a regulation in Subpart F in this part or in an order extending the effective date of the food additives amendment for use of petroleum waxes as an indirect additive to food.	
Sodium dioctyl sulfosuccinate.	
Sodium dodecylbenzenesulfonate.	
Sodium lauryl sulfate	
Sorbitan and sorbitol esters of fatty acids from vegetable or animal oils.	
Spermaceti wax	
Tetrahydrofuran	
Toluene	

(c) The coating in the finished form in which it is to contact food, when extracted with the solvent or solvents characterizing the type of food, and under conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2526(c), shall yield net chloroform-soluble extractives not to exceed 0.5 milligram per square inch of coated surface.

§ 121.2570 Ethylene-vinyl acetate copolymers.

Ethylene-vinyl acetate copolymers may be safely used as articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) Ethylene-vinyl acetate copolymers consist of basic resins produced by the catalytic copolymerization of ethylene and vinyl acetate to which may have been added certain optional substances to impart desired technological or physical properties to the resin. Subject to any limitations prescribed in this section, the optional substances may include:

(1) Substances generally recognized as safe in food and food packaging.

(2) Substances the use of which is permitted under applicable regulations in this Part 121, prior sanction, or approvals.

(3) Substances identified in § 121.2514 (b)(3) (xxv), (xxvi), (xxvii), (xxx), and (xxxiii).

(4) Erucamide as identified in § 121.2509.

(b) Ethylene-vinyl acetate copolymers, with or without the optional substances described in paragraph (a) of this section, when extracted with the solvent or solvents characterizing the type of food, and under conditions of time and temperature characterizing the conditions of their intended use as determined from Tables 1 and 2 of § 121.2526(c) of this Subpart F, shall yield net chloroform-soluble extractives corrected for zinc as zinc oleate not to exceed 0.5 milligram per square inch of an appropriate sample.

§ 121.2571 Components of paper and paperboard in contact with dry food.

The substances listed in this section may be safely used as components of the uncoated or coated food-contact surface of paper and paperboard intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding dry food of the type identified in § 121.2526(c), table 1, under type VIII, subject to the provisions of this section.

(a) The substances are used in amounts not to exceed that required to accomplish their intended physical or technical effect, and are so used as to accomplish no effect in food other than that ordinarily accomplished by packaging.

(b) The substances permitted to be used include the following:

(1) Substances that by § 121.2526 and other applicable regulations in this Part 121 may be safely used as components of the uncoated or coated food-contact surface of paper and paperboard, subject to the provisions of such regulation.

(2) Substances identified in the following list:

List of substances	Limitations
Aluminum and calcium salts of FD & C dyes on a substrate of alumina.	Colorant.
Ammonium nitrate.	
Amylose	
Barium metaborate	For use as preservative in coatings and sizings.
N,N'-Bis(hydroxyethyl)lauramide.	
Borax	For use as preservative in coatings.
Boric acid	Do.
sec-Butyl alcohol	
Butyl benzyl phthalate	
Candelilla wax	
Carbon tetrachloride	
Chloral hydrate	Polymerization reaction-control agent.
N-Cyclohexyl-p-toluene sulfonamide.	
2,5-Di-*tert*-butyl hydroquinone	
Diethanolamine	
Diethylene glycol monobutyl ether.	
Diethylene glycol monoethyl ether.	
Diethylenetriamine	
1,2-Dihydro-2,2,4-trimethyl quinoline, polymerized.	Antioxidant in coatings only.
N,N-Diisopropanolamide of tallow fatty acids.	
Diphenylamine	
tert-Dodecyl thioether of polyethylene glycol.	
Erucamide (erucylamide)	
Ethylene oxide	Fumigant in sizing.
Ethylene oxide adduct of mono-(2-ethylhexyl) o-phosphate.	
Fatty acid (C_{12}-C_{18}) diethanolamide.	
Fish oil fatty acids, hydrogenated, potassium salt.	
Formaldehyde	
Glyceryl monocaprate	
Glyoxal	
Hexamethylenetetramine	Polymerization crosslinking agent for protein, including casein. As neutralizing agent with myristo-chromic chloride complex and stearato-chromic chloride complex.
Hexylene glycol (2-methyl-2,4-pentanediol).	
Hydroabietyl alcohol	
Isopropanolamine hydrochloride.	
Isopropyl *m*- and *p*-cresol (thymol derived).	
Itaconic acid	
Maleic anhydride-diisobutylene copolymer, ammonium or sodium salt.	
Melamine-formaldehyde modified with: Alcohols (ethyl, butyl, isobutyl, propyl, or isopropyl). Diethylenetriamine. Imino-bis-butylamine. Imino-bis-ethyleneimine. Imino-bis-propylamine. Polyamines made by reacting ethylenediamine or trimethylenediamine with dichloroethane or dichloropropane. Sulfanilic acid. Tetraethylenepentamine. Triethylenetetramine.	Basic polymer.
Methyl alcohol	
Methyl esters of mono-, di-, and tripropylene glycol.	
Methyl naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	
Monoglyceride citrate	
Myristo chromic chloride complex.	
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	
Nickel	
β-Nitrostyrene	Basic polymer.
Oleic acid reacted with *N*-alkyl-(C_{16}-C_{18})trimethylenediamine.	
Petroleum hydrocarbons, light and odorless.	
Petroleum sulfonates	
Pine oil	
Polyethylene, air oxidized (minimum molecular weight 1,200).	
Polyethylene glycol 200	
Polyethylene glycol (200) dilaurate.	
Polymers: Homopolymers and copolymers of the following monomers: Acrylamide. Acrylic acid and its methyl, ethyl, butyl, propyl, or octyl esters. Acrylonitrile. Butadiene. Crotonic acid. Cyclol acrylate. Decyl acrylate. Diallyl fumarate. Diallyl maleate. Diallyl phthalate. Dibutyl fumarate. Dibutyl itaconate. Dibutyl maleate. Di(2-ethylhexyl) maleate. Dioctyl fumarate. Dioctyl maleate. Divinylbenzene. Ethylene. 2-Ethylhexyl acrylate. Fumaric acid. Glycidyl methacrylate. 2-Hydroxyethyl acrylate. Isobutyl acrylate. Isobutylene. Isoprene. Itaconic acid. Maleic anhydride and its methyl or butyl esters. Methacrylic acid and its methyl, ethyl, butyl, or propyl esters. Methylstyrene. Mono(2-ethylhexyl) maleate. Monoethyl maleate. Styrene. Vinyl acetate. Vinyl butyrate. Vinyl chloride. Vinyl crotonate. Vinyl hexoate. Vinylidene chloride. Vinyl pelargonate. Vinyl propionate. Vinyl pyrrolidone. Vinyl stearate. Vinyl sulfonic acid.	Basic polymer.
Polyoxyethylated (minimum 20 mols) oleyl alcohol.	
Polyoxyethylene (minimum 12 mols) ester of tall oil (30%-40% rosin acids).	
Polyoxyethylene ethers of octyl- or nonylphenol.	
Polyoxypropylene-polyoxyethylene glycol (minimum molecular weight 1,900).	
Polyvinyl alcohol	
Pyrethrins in combination with piperonyl butoxide.	In outside plies of multiwall bags.
Sodium diisobutylphenoxy diethoxyethyl sulfonate.	
Sodium diisobutylphenoxy monoethoxy ethylsulfonate.	
Sodium n-dodecylpolyethoxy (50 moles) sulfate.	
Sodium isododecylphenoxypolyethoxy (40 moles) sulfate.	
Sodium *N*-methyl-*N*-oleyl taurate.	
Sodium methyl siliconate	
Sodium nitrite	
Sodium polyacrylate	
Sodium bis-tridecylsulfosuccinate	
Sodium xylene sulfonate	
Sorbose	
Stearato chromic chloride complex.	
Styrene-methacrylic acid copolymer, potassium salt.	
Tetraethylenepentamine	Polymerization cross-linking agent.
Tetrasodium *N*-(1,2-dicarboxyethyl)-*N*-octadecyl sulfosuccinamate.	
Toluene	
Triethanolamine	
Triethylenetetramine	Polymerization cross-linking agent.
Urea-formaldehyde chemically modified with: Alcohol (methyl, ethyl, butyl, isobutyl, propyl, or isopropyl). Aminomethylsulfonic acid. Diaminobutane. Diaminopropane. Diethylenetriamine. *N,N'*-Dioleoylethylenediamine. Diphenylamine. *N,N'*-Distearoylethylenediamine. Ethylenediamine. Guanidine. Imino-bis-butylamine. Imino-bis-ethylamine. Imino-bis-propylamine. *N*-Oleoyl-*N'*-stearoylethylenediamine. Polyamines made by reacting ethylenediamine or triethylenediamine with dichloroethane or dichloropropane. Tetraethylenepentamine. Triethylenetetramine.	
Xylene	
Xylene sulfonic acid-formaldehyde condensate, sodium salt.	
Zinc stearate	

§ 121.2572 Polysulfide polymer-polyepoxy resins.

Polysulfide polymer-polyepoxy resins may be safely used as the food-contact surface of articles intended for packaging, transporting, holding, or otherwise contacting dry food, in accordance with the following prescribed conditions:

(a) Polysulfide polymer-polyepoxy resins are the reaction products of liquid polysulfide polymers and polyfunctional epoxide resins, cured with the aid of tri(dimethylaminomethyl) phenol, to which have been added certain optional substances to impart desired technological properties to the resins. Subject to any limitations prescribed in this section, the optional substances may include:

(1) Substances generally recognized as safe in food and food packaging.

(2) Substances the use of which is permitted under applicable regulations in this part, prior sanctions, or approvals.

(3) Substances named in this subparagraph and further identified as required:

List of substances	*Limitations*
Bis(2-chloroethyl) formal.	
Bis(dichloropropyl) formal.	Cross-linking agent.
Butyl alcohol	Solvent.
Carbon black (channel process).	
Chlorinated paraffins	Cross-linking agent.
Epoxidized linseed oil.	
Epoxidized soybean oil.	
Epoxy resins (as listed in § 121.2514 (b) (3) (viii) (*a*)).	
Ethylene glycol monobutyl ether.	Solvent.
Magnesium chloride	
Methyl isobutyl ketone.	Solvent.
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt.	
Sodium dibutyl naphthalene sulfonate.	Wetting agent.
Sodium hydrosulfide	
Sodium polysulfide	
$\beta,\beta',\gamma,\gamma'$-Tetrachloro normal propyl ether.	Cross-linking agent.
Titanium dioxide	
Toluene	Solvent.
Trichloroethane	Cross-linking agent.
1,2,3-Trichloropropane.	Do.
Urea-formaldehyde resins.	
Xylene	Solvent.

(b) The resins are used as the food-contact surface for dry food.

(c) An appropriate sample of the finished resin in the form in which it contacts food, when subjected to Method 6191 in Federal Test Method Standard No. 141, published in "Varnish, Lacquer, and Related Materials—Methods of Inspection and Sampling" (General Services Administration, Washington 25, D.C.), using No. 50 Emery abrasive in lieu of Ottawa sand, shall exhibit an abrasion coefficient of not less than 20 liters per mil of film thickness.

§ 121.2573 [Reserved]

§ 121.2574 Polycarbonate resins.

Polycarbonate resins may be safely used as articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) Polycarbonate resins are polyesters produced by the condensation of 4,4'-isopropylidenediphenol and carbonyl chloride, under controlled conditions, to which may have been added certain optional adjuvant substances required in the production of the resins.

(b) The optional adjuvant substances required in the production of the resins may include substances generally recognized as safe in food, substances used in accordance with a prior sanction or approval, and the following:

List of substances:	*Limitations*
p-tert-Butylphenol	
Chloroform	
Ethylene dichloride	
Heptane	
Methylene chloride	
Pyridine	
Triethylamine	

(c) Polycarbonate resins shall conform to the specification prescribed in subparagraph (1) of this paragraph and shall meet the extractives limitations prescribed in subparagraph (2) of this paragraph.

(1) *Specification.* Polycarbonate resins can be identified by their characteristic infrared spectrum.

(2) *Extractives limitations.* The polycarbonate resins to be tested shall be ground or cut into small particles that will pass through a U.S. standard sieve No. 6 and that will be held on a U.S. standard sieve No. 10.

(i) Polycarbonate resins, when extracted with distilled water at reflux temperature for 6 hours, shall yield total extractives not to exceed 0.15 percent by weight of the resins.

(ii) Polycarbonate resins, when extracted with 50 percent (by volume) ethyl alcohol in distilled water at reflux temperature for 6 hours, shall yield total extractives not to exceed 0.15 percent by weight of the resins.

(iii) Polycarbonate resins, when extracted with *n*-heptane at reflux temperature for 6 hours, shall yield total extractives not to exceed 0.15 percent by weight of the resins.

§ 121.2575 Paraffin, synthetic.

Synthetic paraffin may be safely used as an impregnant in, coating on, or component of coatings on articles used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) The additive is synthesized by the Fischer-Tropsch process from carbon monoxide and hydrogen, which are catalytically converted to a mixture of paraffin hydrocarbons. Lower molecular-weight fractions are removed by distillation. The residue is hydrogenated and further treated by percolation through activated charcoal.

(b) Synthetic paraffin shall conform to the following specifications:

(1) *Congealing point.* The substance has a congealing point of not less than 200° F. nor more than 210° F. as determined by A.S.T.M. D-938-49.

(2) *Oil content.* The substance has an oil content not exceeding 0.5 percent as determined by A.S.T.M. D-721-56T.

(3) *Absorptivity.* The substance has an absorptivity at 290 millimicrons in decahydronaphthalene at 190° F. not exceeding 0.01 as determined by A.S.T.M. 131.

§ 121.2576 Cross-linked polyester resins.

Cross-linked polyester resins may be safely used as articles or components of articles intended for repeated use in contact with food, in accordance with the following prescribed conditions:

(a) The cross-linked polyester resins are produced by the condensation of one or more of the acids listed in subparagraph (1) of this paragraph with one or more of the alcohols listed in subparagraph (2) of this paragraph, followed by copolymerization with one or more of the cross-linking agents listed in subparagraph (3) of this paragraph:

(1) Polybasic acids:

Adipic.
Fatty acids, and dimers thereof, from natural sources.
Fumaric.
Isophthalic.
Maleic.
Orthophthalic.
Sebacic.
Terephthalic.
Trimellitic.

(2) Polyhydric alcohols:

Butylene glycol.
Diethylene glycol.
2,2-Dimethyl-1,3-propanediol.
Dipropylene glycol.
Ethylene glycol.
Glycerol.
Mannitol.
α-Methyl glucoside.
Pentaerythritol.
Polyoxypropylene ethers of 4,4'-isopropylidenediphenol (containing an average of 2-7.5 moles of propylene oxide).
Propylene glycol.
Sorbitol.
Trimethylol ethane.
Trimethylol propane.
2,2,4-Trimethyl-1,3-pentanediol.

(3) Cross-linking agents:

Butyl acrylate.
Butyl methacrylate.
Ethyl acrylate.
Ethylhexyl acrylate.
Methyl acrylate.
Methyl methacrylate.
Styrene.
Vinyl toluene.

(b) Optional adjuvant substances employed to facilitate the production of the resins or added thereto to impart desired technical or physical properties include the following, provided that the quantity used does not exceed that reasonably required to accomplish the intended physical or technical effect and does not exceed any limitations prescribed in this section:

List of substances	Limitations (limits of addition expressed as percent by weight of finished resin)
1. Inhibitors:	Total not to exceed 0.08 percent.
Benzoquinone	0.01 percent.
tert-Butyl catechol	
tert-Butyl hydroquinone	
Di-*tert*-butyl hydroquinone	
Hydroquinone	
2. Accelerators:	Total not to exceed 1.5 percent.
Benzyl trimethyl ammonium chloride.	0.05 percent.
Calcium naphthenate	
Cobalt naphthenate	
Copper naphthenate	
N, N-Diethylaniline	0.4 percent.
N, N-Dimethylaniline	0.4 percent.
Ethylene guanidine hydrochloride.	0.05 percent.

List of substances	Limitations (limits of addition expressed as percent by weight of finished resin)
3. Catalysts:	Total not to exceed 1.5 percent.
Azo-bis-isobutyronitrile	
Benzoyl peroxide	
tert-Butyl perbenzoate	
Chlorbenzoyl peroxide	
Cumene hydroperoxide	
Dicumyl peroxide	
Lauroyl peroxide	
p-Menthane hydroperoxide	
Methyl ethyl ketone peroxide.	
4. Solvents for inhibitors, accelerators, and catalysts:	
Butyl benzyl phthalate (containing not more than 1.0 percent by weight of dibenzyl phthalate).	
Dibutyl phthalate	
Diethylene glycol	As a solvent for benzyl trimethyl ammonium chloride or ethylene guanidine hydrochloride only.
Dimethyl phthalate	
Methyl alcohol	
Styrene	
Triphenyl phosphate	
5. Reinforcements:	
Asbestos	
Glass fiber	
Polyester fiber produced by the condensation of one or more of the acids listed in paragraph (a)(1) of this section with one or more of the alcohols listed in paragraph (a)(2) of this section.	
6. Miscellaneous materials:	
Castor oil, hydrogenated	
α-Methylstyrene	
Polyethylene glycol 6000	
Silicon dioxide	
Wax, petroleum	Complying with § 121.2586.

(c) The cross-linked polyester resins, with or without the optional substances described in paragraph (b) of this section, and in the finished form in which they are to contact food, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of their intended use, as determined from tables 1 and 2 of § 121.2526(c), shall meet the following extractives limitations:

(1) Net chloroform-soluble extractives not to exceed 0.1 milligram per square inch of food-contact surface tested when the prescribed food-simulating solvent is water or 8 or 50 percent alcohol.

(2) Total nonvolatile extractives not to exceed 0.1 milligram per square inch of food-contact surface tested when the prescribed food-simulating solvent is heptane.

(d) In accordance with good manufacturing practice, finished articles containing the cross-linked polyester resins shall be thoroughly cleansed prior to their first use in contact with food.

§ 121.2577 Pressure-sensitive adhesives.

Pressure-sensitive adhesives may be safely used as the food-contact surface of labels and/or tapes applied to food, in accordance with the following prescribed conditions:

(a) Pressure-sensitive adhesives prepared from one or a mixture of two or more of the substances listed in this paragraph may be used as the food-contact surface of labels and/or tapes applied to poultry, dry food, and processed, frozen, dried, or partially dehydrated fruits or vegetables.

(1) Substances generally recognized as safe in food.

(2) Substances used in accordance with a prior sanction or approval.

(3) Color additives listed for use in or on food in Part 8 of this chapter.

(4) Substances identified in § 121.1059 other than substances used in accordance with paragraph (a)(2) of this section.

(b) Pressure-sensitive adhesives prepared from one or a mixture of two or more of the substances listed in this paragraph may be used as the food-contact surface of labels and/or tapes applied to raw fruit and raw vegetables.

(1) Substances listed in paragraph (a) (1), (2), and (3) of this section and those substances listed in paragraph (a) (4) of this section not identified in subparagraph (2) of this paragraph.

(2) Substances identified in this subparagraph and subject to the limitations provided:

BHA.
BHT.
Butadiene-acrylonitrile copolymer.
Butadiene-acrylonitrile-styrene copolymer.
Butadiene-styrene copolymer.
Butyl rubber.
Chlorinated natural rubber.
Isobutylene-styrene copolymer.
Petrolatum.
Polybutene-1.
Polyisobutylene.
cis-1,4-Polyisoprene.
Polystyrene.
Propyl gallate.
Rapeseed oil, vulcanized.
Rosins and rosin derivatives as provided in § 121.2592.
Rubber hydrochloride.
Rubber (natural latex solids or crepe, smoked or unsmoked).
Terpene resins (α- and β-pinene), homopolymers, copolymers, and condensates with phenol, formaldehyde, coumarone, and/or indene.
Tetrasodium ethylenediaminetetraacetate.

§ 121.2578 Hot-melt strippable food coatings.

Hot-melt strippable food coatings may be safely applied to food, subject to the provisions of this section.

(a) The coatings are applied to and used as removable coatings for food.

(b) The coatings may be prepared, as mixtures, from the following substances:

(1) Substances generally recognized as safe in food.

(2) Substances identified in this subparagraph.

List of substances	*Limitations*
Acetylated monoglycerides	Complying with § 121.1018.
Cellulose acetate butyrate	
Cellulose acetate propionate	
Mineral oil, white	For use only as a component or hot-melt strippable food coatings applied to frozen meats and complying with § 121.1146.

§ 121.2579 4,4′-Isopropylidenediphenol-epichlorohydrin resins minimum molecular weight 10,000.

4,4′-Isopropylidenediphenol-epichlorohydrin resins having a minimum molecular weight of 10,000 may be safely used as articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food in accordance with the following prescribed conditions:

(a) 4,4′ - Isopropylidenediphenol-epichlorohydrin resins consist of basic resins produced by the condensation of equimolar amounts of 4,4′-isopropylidenediphenol and epichlorohydrin terminated with phenol, to which may have been added certain optional adjuvant substances required in the production of the resins.

(b) The optional adjuvant substances required in the production of the resins may include substances generally recognized as safe in food, substances used in accordance with a prior sanction or approval, and the following:

List of substances	Limitations
Butyl alcohol	Not to exceed 300 p.p.m. as residual solvent in finished resin.
Ethyl alcohol	
Toluene	Not to exceed 1,000 p.p.m. as residual solvent in finished resin.

(c) 4,4′-Isopropylidenediphenol - epichlorohydrin resins shall meet the following nonvolatile extractives limitations:

(1) Maximum extractable nonvolatile fraction of 2 parts per million when extracted with distilled water at 70° C. for 2 hours, using a volume-to-surface ratio of 2 milliliters per square inch.

(2) Maximum extractable nonvolatile fraction of 3 parts per million when extracted with *n*-heptane at 70° C for 2 hours, using a volume-to-surface ratio of 2 milliliters per square inch.

(3) Maximum extractable nonvolatile fraction of 6 parts per million when extracted with 10 percent (by volume) ethyl alcohol in distilled water at 70° C for 2 hours, using a volume-to-surface ratio of 2 milliliters per square inch.

(d) The provisions of this section are not applicable to 4,4′-isopropylidenediphenol-epichlorohydrin resins listed in other sections of this Subpart F.

§ 121.2580 Polyethylene resins, carboxyl modified.

Carboxyl-modified polyethylene resins may be safely used as the food-contact surface of articles intended for use in contact with food in accordance with the following prescribed conditions:

(a) For the purpose of this section, carboxyl-modified polyethylene resins consist of basic polymers produced when ethylene-methyl acrylate basic copolymers, containing no more than 25 weight percent of polymer units derived from methyl acrylate, are made to react in an aqueous medium with one or more of the following substances:

Ammonium hydroxide.
Calcium carbonate.
Potassium hydroxide.
Sodium hydroxide.

(b) The finished food-contact article, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2526(c), yields total extractives in each extracting solvent not to exceed 0.5 milligram per square inch of food-contact surface as determined by the methods described in § 121.2526(d); and if the finished food-contact article is itself the subject of a regulation in this Subpart F, it shall also comply with any specifications and limitations prescribed for it by that regulation. In testing the finished food-contact articles, a separate test sample is to be used for each required extracting solvent.

(c) The provisions of paragraph (b) of this section are not applicable to carboxyl-modified polyethylene resins used in food-packaging adhesives complying with § 121.2520.

§ 121.2581 Chlorinated polyether resins.

Chlorinated polyether resins may be safely used as articles or components of articles intended for repeated use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) The chlorinated polyether resins are produced by the catalytic polymerization of 3,3-bis(chloromethyl)oxetane, and shall contain not more than 2 percent residual monomer.

(b) In accordance with good manufacturing practice, finished articles containing the chlorinated polyether resins shall be thoroughly cleansed prior to their first use in contact with food.

§ 121.2582 Ethylene-methacrylic acid copolymers and their partial salts.

Ethylene-methacrylic acid copolymers and/or their ammonium, calcium, magnesium, sodium, and/or zinc partial salts may be safely used as articles, or components of articles, intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, the ethylene-methacrylic acid copolymers consist of basic copolymers produced by the copolymerization of ethylene and methacrylic acid such that the copolymers contain no more than 20 weight percent of polymer units derived from methacrylic acid.

(b) The finished food-contact article, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2526(c), yields net acidified chloroform-soluble extractives in each extracting solvent not to exceed 0.5 milligram per square inch of food-contact surface when tested by the methods described in paragraph (c) of this section; and if the finished food-contact article is itself the subject of a regulation in this Subpart F, it shall also comply with any specifications and limitations prescribed for it by that regulation. (NOTE: In testing the finished food-contact article, use a separate test sample for each required extracting solvent.)

(c) *Analytical methods*—(1) *Selection of extractability conditions.* First ascertain the type of food (table 1 of § 121.2526(c)) that is being packed or used in contact with the finished food-contact article described in paragraph (b) of this section, and also ascertain the normal conditions of thermal treatment used in packaging or contacting the type of food involved. Using table 2 of § 121.2526(c), select the food-simulating solvent or solvents and the time-temperature test conditions that correspond to the intended use of the finished food-contact article. Having selected the appropriate food-simulating solvent or solvents and time-temperature exaggeration over normal use, follow the applicable extraction procedure.

(2) *Reagents*—(i) *Water.* All water used in extraction procedures should be freshly demineralized (deionized), distilled water.

(ii) *n-Heptane.* Reagent grade, freshly redistilled before use, using only material boiling at 208° F.

(iii) *Alcohol.* 8 or 50 percent (by volume), prepared from undenatured 95 percent ethyl alcohol diluted with demineralized (deionized), distilled water.

(iv) *Chloroform.* Reagent grade, freshly redistilled before use, or a grade having an established, consistently low blank.

(3) *Selection of test method.* The finished food-contact articles shall be tested either by the extraction cell described in the Journal of the Association of Official Agricultural Chemists, Volume 47, No. 1, pages 177–179 (February 1964), also described in ASTM Method F 34–63T, or by adapting the in-container methods described in § 121.2514(e).

(4) *Selection of samples.* Quadruplicate samples should be tested, using for each replicate sample the number of finished articles with a food-contact surface nearest to 100 square inches.

(5) *Determination of amount of extractives*—(i) *Total residues.* At the end of the exposure period, remove the test container or test cell from the oven, if any, and combine the solvent for each replicate in a clean Pyrex (or equivalent) flask or beaker, being sure to rinse the test container or cell with a small quantity of clean solvent. Evaporate the food-simulating solvents to about 100 milliliters in the flask, and transfer to a clean, tared evaporating dish (platinum or Pyrex), washing the flash three times with small portions of solvent used in the extraction procedure, and evaporate to a few milliliters on a nonsparking, low-temperature hotplate. The last few milliliters should be evaporated in an oven maintained at a temperature of 221° F. Cool the evaporating dish in a desiccator for 30 minutes and weigh the residues to the nearest 0.1 milligram, *e*. Calculate the extractives in milligrams per square inch of the container or material surface.

(*a*) *Water and 8- and 50-percent alcohol.*

Milligrams extractives per square inch $=\frac{e}{s}$.

(*b*) *Heptane.* Milligrams extractives per square inch $=\frac{e}{(s)(F)}$.

where:

e = Milligrams extractives per sample tested.
s = Surface area tested, in square inches.
F = Five, the ratio of the amount of extractives removed by heptane under exaggerated time-temperature test conditions compared to the amount extracted by a fat or oil under exaggerated conditions of thermal sterilization and use.
Acidified chloroform-soluble extractives residue.

e' is substituted for e in the above equations when necessary.

If when calculated by the equations in (*a*) and (*b*) of this subdivision, the extractives in milligrams per square inch exceed the limitations prescribed in paragraph (b) of this section, proceed to subdivision (ii) of this subparagraph (method for determining the amount of acidified chloroform-soluble extractives residue).

(ii) *Acidified chloroform-soluble extractives residue.* Add 3 milliliters of 37 percent ACS reagent grade hydrochloric acid and 3 milliliters of distilled water to the evaporating dish containing the dried and weighed residue, *e*, obtained in subdivision (i) of this subparagraph. Mix well so every portion of the residue is wetted with the hydrochloric acid solution. Then add 50 milliliters of chloroform. Warm carefully, and filter through Whatman No. 41 filter paper (or equivalent) in a Pyrex (or equivalent) funnel, collecting the filtrate in a clean separatory funnel, shake for 1 minute, then draw off the chloroform layer into a clean tared evaporating dish (platinum or Pyrex). Repeat the chloroform extraction, washing the dish, the filter paper, and the separatory funnel with this second portion of chloroform. Add this filtrate to the original filtrate and evaporate the total down to a few milliliters on a low-temperature hotplate. The last few milliliters should be evaporated in an oven maintained at 221° F. Cool the evaporating dish in a desiccator for 30 minutes and weigh to the nearest 0.1 milligram to get the acidified chloroform-soluble extractives residue, *e′*. This *e′* is substituted for *e* in the equations in (*a*) and (*b*) of subdivision (i) of this subparagraph.

(d) The provisions of paragraph (b) of this section are not applicable to the ethylene-methacrylic acid copolymers and/or their ammonium, calcium, magnesium, sodium, and/or zinc partial salts used in food-packaging adhesives complying with § 121.2520.

§ 121.2583 Adjuvant substances used in the manufacture of foamed polystyrene.

The following substances may be safely used as adjuvants in the manufacture of foamed polystyrene intended for use in contact with food, subject to any prescribed limitations:

List of substances:	*Limitations*
Isopentane	For use as blowing agent.
n-Pentane	Do.
1,1,2,2-Tetrachloroethylene.	For use only as a blowing agent adjuvant at a level not to exceed 0.3% by weight of finished foamed polystyrene intended for use in contact with food only of the types identified in § 121.2526 (c), table 1, under categories I, II, VI, and VIII.
Toluene	For use only as a blowing agent adjuvant at a level not to exceed 0.35% by weight of finished foamed polystyrene.

§ 121.2584 Styrene-divinylbenzene cross-linked copolymer resins.

Styrene-divinylbenzene cross-linked copolymer resins may be safely used as articles or components of articles intended for repeated use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) The resins are produced by the copolymerization of styrene with divinylbenzene.

(b) The resins meet the extractives limitations prescribed in this paragraph:

(1) The resins to be tested are ground or cut into small particles that will pass through a U.S. standard sieve No. 3 and that will be held on a U.S. standard sieve No. 20.

(2) A 100-gram sample of the resins, when extracted with 100 milliliters of ethyl acetate at reflux temperature for 1 hour, yields total extractives not to exceed 1 percent by weight of the resins.

(c) In accordance with good manufacturing practice, finished articles containing the resins shall be thoroughly cleansed prior to their first use in contact with food.

§ 121.2585 4,4'-Isopropylidenediphenol-epichlorohydrin thermosetting epoxy resins.

4,4'-Isopropylidenediphenol-epichlorohydrin thermosetting epoxy resins may be safely used as articles or components of articles intended for repeated use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) The basic thermosetting epoxy resin is made by reacting 4,4'-isopropylidenediphenol with epichlorohydrin.

(b) The resin may contain one or more of the following curing system additives provided that the quantity used does not exceed that reasonably required to accomplish the intended effect:

Allyl glycidyl ether.
1,2-Epoxy-3-phenoxypropane.
Glyoxal.
4,4'-Isopropylidenediphenol.
4,4'-Methylenedianiline.
m-Phenylenediamine.

(c) In accordance with good manufacturing practice, finished articles containing the resins shall be thoroughly cleansed prior to their first use in contact with food.

(d) The provisions of this section are not applicable to 4,4'-isopropylidenediphenol-epichlorohydrin resins listed in other sections of this Subpart F.

§ 121.2586 Petroleum wax.

Petroleum wax may be safely used as a component of nonfood articles in contact with food, in accordance with the following conditions:

(a) Petroleum wax is a mixture of solid hydrocarbons, paraffinic in nature, derived from petroleum, and refined to meet the specifications prescribed in this section.

(b) The petroleum wax meets the following ultraviolet absorbance limits when subjected to the analytical procedure described in § 121.1156(b).

Ultraviolet absorbance per centimeter path length:

280–289 millimicrons	0.15 maximum
290–299 millimicrons	0.12 maximum
300–359 millimicrons	0.08 maximum
360–400 millimicrons	0.02 maximum

(c) Petroleum wax may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the act, in an amount not greater than that required to produce its intended effect.

§ 121.2588 Petrolatum.

Petrolatum may be safely used as a component of nonfood articles in contact with food, in accordance with the following conditions:

(a) Petrolatum complies with the specifications set forth in the U.S. Pharmacopeia XVI for white petrolatum or in The National Formulary XI for yellow petrolatum.

(b) Petrolatum meets the following ultraviolet absorbance limits when subjected to the analytical procedure described in § 121.1156(b):

Ultraviolet absorbance per centimeter path length:

Millimicrons:	*Maximum*
280–289	0.25
290–299	.20
300–359	.14
360–400	.04

(c) It is used or intended for use as a protective coating of the surfaces of metal or wood tanks used in fermentation process, in an amount not in excess of that required to produce its intended effect.

(d) Petrolatum as defined by this section may be used for the functions described and within the limitations prescribed by specific regulations in Subpart F which prescribe uses of petrolatum. For the purpose of cross-reference, such specific regulations include: §§ 121.2514, 121.2519, 121.2520, 121.2526, 121.2535, 121.2553, 121.2557, 121.2562, and 121.2577.

(e) Petrolatum may contain any antioxidant permitted in food by regulations issued pursuant to section 409 of the act, in an amount not greater than that required to produce its intended effect.

§ 121.2589 Mineral oil.

Mineral oil may be safely used as a component of nonfood articles intended for use in contact with food, subject to the provisions of this section:

(a) White mineral oil meeting the specifications prescribed in § 121.1146 may be used as a component of nonfood articles provided such use complies with any applicable limitations in this Part 121. The use of white mineral oil in or on food itself, including the use of white mineral oil as a protective coating or release agent for food, is subject to the provisions of § 121.1146.

(b) Technical white mineral oil identified in subparagraph (1) of this paragraph may be used as provided in subparagraph (2) of this paragraph.

(1) Technical white mineral oil consists of specially refined distillates of virgin petroleum or of specially refined distillates that are produced synthetically from petroleum gases. Technical white mineral oil meets the following specifications:

(i) Saybolt color 20 minimum as determined by ASTM Method D–156.

(ii) Ultraviolet absorbance limits as follows:

Wavelength	Maximum absorbance per centimeter optical pathlength
mμ	
280–289	4.0
290–299	3.3
300–329	2.3
330–350	0.8

Technical white mineral oil containing antioxidants shall meet the specified ultraviolet absorbance limits after correction for any absorbance due to the antioxidants. The ultraviolet absorbance shall be determined by the procedure described for application to mineral oil under "Specification" on page 66 of the Journal of the Association of Official Agricultural Chemists, Volume 45 (February 1962), disregarding the last two sentences of that procedure and substituting therefor the following: Determine the absorbance of the mineral oil extract in a 10-millimeter cell in the range from 260–350 mμ, inclusive, compared to the solvent control. If the absorbance so measured exceeds 2.0 at any point in range 280–350 mμ, inclusive, dilute the extract and the solvent control, respectively, to twice their volume with dimethyl sulfoxide and remeasure the absorbance. Multiply the remeasured absorbance values by 2 to determine the absorbance of the mineral oil extract per centimeter optical pathlength.

(2) Technical white mineral oil may be used wherever mineral oil is permitted for use as a component of nonfood articles complying with §§ 121.2519, 121.2520, 121.2531, 121.2535, 121.2536, 121.2553, 121.2557, and 121.2562.

(3) Technical white mineral oil may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the act, in an amount

not greater than that required to produce its intended effect.

§ 121.2590 Isobutylene polymers.

Isobutylene polymers may be safely used as components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, isobutylene polymers are those produced as follows:

(1) Polyisobutylene produced by the homopolymerization of isobutylene such that the finished polymers have a molecular weight of 750,000 (Flory) or higher.

(2) Isobutylene-isoprene copolymers produced by the copolymerization of isobutylene with not more than 3 molar percent of isoprene such that the finished polymers have a molecular weight of 300,000 (Flory) or higher.

(3) Chlorinated isobutylene-isoprene copolymers produced when isobutylene-isoprene copolymers (molecular weight 300,000 (Flory) or higher) are modified by chlorination with not more than 1.3 weight-percent of chlorine.

(b) The polymers identified in paragraph (a) of this section may contain optional adjuvant substances required in the production of the polymers. The optional adjuvant substances required in the production of the polymers may include substances generally recognized as safe in food, substances used in accordance with a prior sanction or approval, and the following:

List of substances	Limitations
Aluminum chloride	
Polysorbate 80	

§ 121.2591 Semirigid and rigid acrylic and modified acrylic plastics.

Semirigid and rigid acrylic and modified acrylic plastics may be safely used as articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) The optional substances used in the formulation of the semirigid and rigid acrylic and modified acrylic plastics include substances generally recognized as safe in food, substance used in accordance with a prior sanction or approval, substances permitted for use in such plastics by regulations in this Part 121, and substances identified in this paragraph. At least 50 weight-percent of the polymer content of the finished plastics shall consist of polymer units derived from one or more of the acrylic or methacrylic monomers listed in subparagraph (1) of this paragraph.

(1) Homopolymers and copolymers of the following monomers:

n-Butyl acrylate.
n-Butyl methacrylate.
Ethyl acrylate.
2-Ethylhexyl acrylate.
Ethyl methacrylate.
Methyl acrylate.
Methyl methacrylate.

(2) Copolymers produced by copolymerizing one or more of the monomers listed in subparagraph (1) of this paragraph with one or more of the following monomers:

Acrylonitrile.
Methacrylonitrile.
α-Methylstyrene.
Styrene.
Vinyl chloride.
Vinylidene chloride.

(3) Polymers identified in subparagraphs (1) and (2) of this paragraph containing no more than 5 weight-percent of total polymer units derived by copolymerization with one or more of the monomers listed in subdivisions (i) and (ii) of this subparagraph. Monomers listed in subdivision (ii) of this subparagraph are limited to use only in plastic articles intended for repeated use in contact with food.

(i) List of minor monomers:

Acrylamide.
Acrylic acid.
1,3-Butylene glycol dimethacrylate.
1,4-Butylene glycol dimethacrylate.
Diethylene glycol dimethacrylate.
Dipropylene glycol dimethacrylate.
Divinylbenzene.
Ethylene glycol dimethacrylate.
Itaconic acid.
Methacrylic acid.
N-Methylolacrylamide.
N-Methylolmethacrylamide.
4-Methyl-1,4-pentanediol dimethacrylate.
Propylene glycol dimethacrylate.
Trivinylbenzene.

(ii) List of minor monomers limited to use only in plastic articles intended for repeated use in contact with food:

tert-Butyl acrylate.
tert-Butylaminoethyl methacrylate.
sec-Butyl methacrylate.
tert-Butyl methacrylate.
Cyclohexyl methacrylate.
Dimethylaminoethyl methacrylate.
2-Ethylhexyl methacrylate.
Hydroxyethyl methacrylate.
Hydroxyethyl vinyl sulfide.
Hydroxypropyl methacrylate.
Isobornyl methacrylate.
Isobutyl methacrylate.
Isopropyl acrylate.
Isopropyl methacrylate.
Methacrylamide.
Methacrylamidoethylene urea.
Methacryloxyacetamidoethylethylene urea.
Methacryloxyacetic acid.
n-Propyl methacrylate.
3,5,5-Trimethylcyclohexyl methacrylate.

(4) Polymers identified in subparagraphs (1), (2), and (3) of this paragraph mixed together and/or with the following polymers, provided that no chemical reactions, other than addition reactions, occur when they are mixed:

Butadiene-acrylonitrile copolymers.
Butadiene-acrylonitrile-styrene copolymers.
Butadiene-acrylonitrile-styrene-methyl methacrylate copolymers.
Butadiene-styrene copolymers.
Butyl rubber.
Natural rubber.
Polybutadiene.
Poly(3-chloro-1,3-butadiene).
Polyesters identified in § 121.2514(b)(3)(vii).
Polyvinyl chloride.
Vinyl chloride-vinyl acetate copolymers.

(5) Antioxidants and stabilizers identified in § 121.2514(b)(3)(xxx) and the following:

Di-*tert*-butyl-p-cresol.
2-Hydroxy-4-methoxybenzophenone.
2-Hydroxy-4-methoxy-2-carboxybenzophenone.
2(2'-Hydroxy-5'-methylphenyl) benzotriazole.
3-Hydroxyphenyl benzoate.
p-Methoxyphenol.
Methyl salicylate.
Phenyl salicylate.

(6) Release agents: Fatty acids derived from animal and vegetable fats and oils, and fatty alcohols derived from such acids.

(7) Surface active agent: Sodium dodecylbenzenesulfonate.

(8) Miscellaneous materials:

Dimethyl phthalate.
Oxalic acid, for use only as a polymerization catalyst aid.
Tetraethylenepentamine, for use only as a catalyst activator at a level not to exceed 0.5 weight-percent based on the monomers.
Toluene.
Xylene.

(b) The semirigid and rigid acrylic and modified acrylic plastics, in the finished form in which they are to contact food, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature as determined from tables 1 and 2 of § 121.2526(c), shall yield extractives not to exceed the following, when tested by the methods prescribed in paragraph (c) of this paragraph:

(1) Total nonvolatile extractives not to exceed 0.3 milligram per square inch of surface tested.

(2) Potassium permanganate oxidizable distilled water and 8 and 50 percent alcohol extractives not to exceed an absorbance of 0.15.

(3) Ultraviolet-absorbing distilled water and 8 and 50 percent alcohol extractives not to exceed an absorbance of 0.30.

(4) Ultraviolet-absorbing *n*-heptane extractives not to exceed an absorbance of 0.10.

(c) *Analytical methods*—(1) *Selection of extractability conditions*. These are to be chosen as provided in § 121.2526(c).

(2) *Preparation of samples*. Sufficient samples to allow duplicates of all applicable tests shall be cut from the articles or formed from the plastic composition under tests, as strips about 2.5 inches by about 0.85-inch wide by about 0.125-inch thick. The total exposed surface should be 5 square inches ±0.5-square inch. The samples, after preparation, shall be washed with a clean brush under hot tapwater, rinsed under running hot tapwater (140° F. minimum), rinsed with distilled water, and air-dried in a dust-free area or in a desiccator.

(3) *Preparation of solvents*. The water used shall be double-distilled water, prepared in a still using a block tin condenser. The 8 and 50 percent (by volume) alcohol solvents shall be prepared from ethyl alcohol meeting the specifications of U.S.P. XVII and diluted with double-distilled water that has been prepared in a still using a tin block condenser. The *n*-heptane shall be spectrophotometric grade. Adequate pre-

cautions must be taken to keep all solvents dust-free.

(4) *Blank values on solvents.* (i) Duplicate determinations of residual solids shall be run on samples of each solvent that have been exposed to the temperature-time conditions of the extraction test without the plastic sample. Sixty milliliters of exposed solvent is pipetted into a clean, weighed platinum dish, evaporated to 2–5 milliliters on a nonsparking, low-temperature hot plate and dried in 212° F. oven for 30 minutes. The residue for each solvent shall be determined by weight and the average residue weight used as the blank value in the total solids determination set out in subparagraph (6) of this paragraph. The residue for an acceptable solvent sample shall not exceed 0.5 milligram per 60 milliliters.

(ii) For acceptability in the ultraviolet absorbers test, a sample of each solvent shall be scanned in an ultraviolet spectrophotometer in 5-centimeter silica spectrophotometric absorption cells. The absorbance of the distilled water when measured versus air in the reference cell shall not exceed 0.03 at any point in the wavelength region of 245 to 310 mμ. The absorbance of the 8 percent alcohol when measured versus distilled water in the reference cell shall not exceed 0.01 at any point in the wavelength region of 245 to 310 mμ. The absorbance of the 50 percent alcohol when measured versus distilled water in the reference cell shall not exceed 0.05 at any point in the wavelength region of 245 to 310 mμ. The absorbance of the heptane when measured versus distilled water in the reference cell shall not exceed 0.15 at 245, 0.09 at 260, 0.04 at 270, and 0.02 at any point in the wavelength region of 280 to 310 mμ.

(iii) Duplicate ultraviolet blank determinations shall be run on samples of each solvent that have been exposed to the temperature-time conditions of the extraction test without the plastic sample. An aliquot of the exposed solvent shall be measured versus the unexposed solvent in the reference cell. The average difference in the absorbances at any wavelength in the region of 245 to 310 mμ shall be used as a blank correction for the ultraviolet absorbers measured at the same wavelength according to subparagraph (8)(ii) of this paragraph.

(iv) The acceptability of the solvents for use in the permanganate test shall be determined by preparing duplicate permanganate test blanks according to subparagraph (7)(iv) of this paragraph. For this test, the directions referring to the sample extract shall be disregarded. The blanks shall be scanned in 5-centimeter silica spectrophotometric cells in the spectrophotometer versus the appropriate solvent as reference. The absorbance in distilled water in the wavelength region of 544 to 552 mμ should be 1.16 but must not be less than 1.05 nor more than 1.25. The absorbance in the 8 and 50 percent alcohol must not be less than 0.85 nor more than 1.15.

(v) Duplicate permanganate test determinations shall be run on samples of distilled water and 8 and 50 percent alcohol solvents that have been exposed to the temperature-time conditions of the extraction test without the plastic sample. The procedure shall be as described in subparagraph (7)(iv) of this paragraph, except that the appropriate exposed solvent shall be substituted where the directions call for sample extract. The average difference in the absorbances in the region of 544 to 552 mμ shall be used as a blank correction for the determination of permanganate oxidizable extractives according to subparagraph (7)(iv) of this paragraph.

(5) *Extraction procedure.* For each extraction, place a plastic sample in a clean 25 millimeters x 200 millimeters hard-glass test tube and add solvent equal to 10 milliliters of solvent per square inch of plastic surface. This amount will be between 45 milliliters and 55 milliliters. The solvent must be preequilibrated to the temperature of the extraction test. Close the test tube with a ground-glass stopper and expose to the specified temperature for the specified time. Cool the tube and contents to room temperature if necessary.

(6) *Determination of total nonvolatile extractives.* Remove the plastic strip from the solvent with a pair of clean forceps and wash the strip with 5 milliliters of the appropriate solvent, adding the washings to the contents of the test tube. Pour the contents of the test tube into a clean, weighed platinum dish. Wash the tube with 5 milliliters of the appropriate solvent and add the solvent to the platinum dish. Evaporate the solvent to 2–5 milliliters on a nonsparking, low-temperature hotplate. Complete the evaporation in a 212° F. oven for 30 minutes. Cool the dish in a desiccator for 30 minutes and weigh to the nearest 0.1 milligram. Calculate the total nonvolatile extractives as follows:

$$\text{Milligrams extractives per square inch} = \frac{e-b}{s};$$

$$\text{Extractives in parts per million} = \left(\frac{e-b}{s}\right)(100),$$

where:

e = Total increase in weight of the dish, in milligrams.

b = Blank value of the solvent in milligrams, as determined in subparagraph (4)(i) of this paragraph.

s = Total surface of the plastic sample in square inches.

(7) *Determination of potassium permanganate oxidizable extractives.* (i) Pipette 25 milliliters of distilled water into a clean 125-milliliter Erlenmeyer flask that has been rinsed several times with aliquots of distilled water. This is the blank. Prepare a distilled water solution containing 1.0 part per million of *p*-methoxyphenol (melting point 54–56° C., Eastman grade or equivalent). Pipette 25 milliliters of this *p*-methoxyphenol solution into a rinsed Erlenmeyer flask. Pipette exactly 3.0 milliliters of 154 parts per million aqueous potassium permanganate solution into the *p*-methoxyphenol and exactly 3.0 milliliters into the blank, in that order. Swirl both flasks to mix the contents and then transfer aliquots from each flask into matched 5-centimeter spectrophotometric absorption cells. The cells are placed in the spectrophotometer cell compartment with the *p*-methoxyphenol solution in the reference beam. Spectrophotometric measurement is conducted as in subdivision (iv) of this subparagraph. The absorbance reading in the region 544–552 mμ should be 0.24 but must be not less than 0.12 nor more than 0.36. This test shall be run in duplicate. For the purpose of ascertaining compliance with the limitations in paragraph (b)(2) of this section, the absorbance measurements obtained on the distilled water extracts according to subdivision (iv) of this subparagraph shall be multiplied by a correction factor, calculated as follows:

$$\frac{0.24}{\text{Average of duplicate } p\text{-methoxyphenol absorbance determinations according to this subdivision (i) of this subparagraph.}} = \text{Correction factor for water extracts.}$$

(ii) The procedure in subdivision (i) of this subparagraph is repeated except that, in this instance, the solvent shall be 8 percent alcohol. The absorbance in the region 544–552 mμ should be 0.26 but must be not less than 0.13 nor more than 0.39. This test shall be run in duplicate. For the purpose of ascertaining compliance with the limitations prescribed in paragraph (b)(2) of this section, the absorbance measurements obtained on the 8 percent alcohol extracts according to subdivision (iv) of this subparagraph shall be multiplied by a correction factor, calculated as follows:

$$\frac{0.26}{\text{Average of duplicate } p\text{-methoxyphenol absorbance determination according to this subdivision (ii) of this subparagraph.}} = \text{Correction factor for aqueous 8 percent alcohol extracts.}$$

(iii) The procedure in subdivision (i) of this subparagraph is repeated except that, in this instance, the solvent shall be 50 percent alcohol. The absorbance in the region 544–552 mμ should be 0.25 but must be not less than 0.12 nor more than 0.38. This test shall be run in duplicate. For the purpose of ascertaining compliance with the limitations prescribed in paragraph (b)(2) of this section, the absorbance measurements obtained on the 50 percent alcohol extracts according to subdivision (iv) of this subparagraph shall be multiplied by a correction factor, calculated as follows:

$$\frac{0.25}{\text{Average of duplicate } p\text{-methoxyphenol absorbance determinations according to subdivision (ii) of this subparagraph.}} = \text{Correction factor for 50 percent aqueous alcohol extracts.}$$

(iv) *Water and 8 and 50 percent alcohol extracts.* Pipette 25 milliliters of the appropriate solvent into a clean, 125-milliliter Erlenmeyer flask that has been rinsed several times with aliquots of the same solvent. This is the blank. Into another similarly rinsed flask, pipette 25 milliliters of the sample extract that has been exposed under the conditions specified in subparagraph (5) of this paragraph. Pipette exactly 3.0 milliliters of 154 parts per million aqueous potassium permanganate solution into the sample and exactly 3.0 milliliters into the blank, in that order. Before use, the potassium permanganate solution shall be checked as in subdivision (i) of this subparagraph. Both flasks are swirled to mix the contents, and then aliquots from each flask are transferred to matched 5-centimeter spectrophotometric absorption cells. Both cells are placed in the spectrophotometer cell compartment with the sample solution in the reference beam. The spectrophotometer is adjusted for 0 and 100 percent transmittance at 700 mμ. The spectrum is scanned on the absorbance scale from 700 mμ to 500 mμ in such a way that the region 544 mμ to 552 mμ is scanned within 5 minutes to 10 minutes of the time that permanganate was added to the solutions. The height of the absorbance peak shall be measured, corrected for the blank as determined in subparagraph (4)(v) of this paragraph, and multiplied by the appropriate correction factor determined according to subdivisions (i), (ii), and (iii) of this subparagraph. This test shall be run in duplicate and the two results averaged.

(8) *Determination of ultraviolet-absorbing extractives.* (i) A distilled water solution containing 1.0 part per million of *p*-methoxyphenol (melting point 54° C.–56° C. Eastman grade or equivalent) shall be scanned in the region 360 to 220 mμ in 5-centimeter silica spectrophotometric absorption cells versus a distilled water reference. The absorbance at the wavelength of maximum absorbance (should be about 285 mμ) is about 0.11 but must be not less than 0.08 nor more than 0.14. This test shall be run in duplicate. For the purpose of ascertaining compliance with the limitations prescribed in paragraph (b) (3) and (4) of this section, the absorbance obtained on the extracts according to subdivision (ii) of this subparagraph shall be multiplied by a correction factor, calculated as follows:

$$\frac{0.11}{\text{Average of duplicate } p\text{-methoxyphenol absorbance determinations according to this subdivision (i) of this subparagraph.}} = \text{Correction factor for ultraviolet absorbers test.}$$

(ii) An aliquot of the extract that has been exposed under the conditions specified in subparagraph (5) of this paragraph is scanned in the wavelength region 360 to 220 mμ versus the appropriate solvent reference in matched 5-centimeter silica spectrophotometric absorption cells. The height of any absorption peak shall be measured, corrected for the blank as determined in subparagraph (4)(iii) of this paragraph, and multiplied by the correction factor determined according to subdivision (i) of this subparagraph.

(d) In accordance with good manufacturing practice, finished semirigid and rigid acrylic and modified acrylic plastics intended for repeated use in contact with food shall be thoroughly cleansed prior to their first use in contact with food.

§ 121.2592 **Rosins and rosin derivatives.**

The rosins and rosin derivatives identified in paragraph (a) of this section may safely be used in the manufacture of articles or components of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The rosins and rosin derivatives are identified as follows:

(1) Rosins:

(i) Gum rosin, refined to color grade of K or paler.

(ii) Wood rosin, refined to color grade of K or paler.

(iii) Tall oil rosin, refined to color grade of K or paler.

(iv) Dark tall oil rosin, a fraction resulting from the refining of tall oil rosin produced by multicolumnar distillation of crude tall oil to effect removal of fatty acids and pitch components and having a saponification number of from 110–135 and 32 percent–44 percent rosin acids.

(v) Dark wood rosin, all or part of the residue after the volatile terpene oils are distilled from the oleoresin extracted from pine wood.

(2) Modified rosins manufactured from rosins identified in subparagraph (1) of this paragraph:

(i) Partially hydrogenated rosin, catalytically hydrogenated to a maximum refractive index of 1.5012 at 100° C., and a color of WG or paler.

(ii) Fully hydrogenated rosin, catalytically hydrogenated to a maximum dehydroabietic acid content of 2 percent, a minimum drop-softening point of 79° C., and a color of X or paler.

(iii) Partially dimerized rosin, dimerized by sulfuric acid catalyst to a drop-softening point of 95° C.–105° C., and a color of WG or paler.

(iv) Fully dimerized rosin, dimerized by sulfuric acid catalyst, and from which sufficient nondimerized rosin has been removed by distillation to achieve a minimum drop-softening point of 143° C., and a color of H or paler.

(v) Disproportionated rosin, catalytically disproportionated to a minimum dehydroabietic acid content of 45 percent, a maximum abietic acid content of 1 percent, a maximum content of substituted phenanthrenes (as retene) of 0.25 percent, and a color of WG or paler.

(3) Rosin esters manufactured from rosins and modified rosins identified in subparagraphs (1) and (2) of this paragraph:

(i) Glycerol ester of wood rosin purified by steam stripping to have an acid number of 5 to 9, a drop-softening point of 88° C.–96° C., and a color of N or paler.

(ii) Glycerol ester of partially hydrogenated wood rosin, having an acid number of 3 to 10, a drop-softening point of 79° C.–88° C., and a color of N or paler.

(iii) Glycerol ester of partially dimerized rosin, having an acid number of 3 to 8, a drop-softening point of 109° C.–119° C., and a color of M or paler.

(iv) Glycerol ester of fully dimerized rosin, having an acid number of 5 to 16, a drop-softening point of 165° C.–175° C., and a color of H or paler.

(v) Glycerol ester of maleic anhydride-modified wood rosin, having an acid number of 30 to 40, a drop-softening point of 138° C.–146° C., a color of M or paler, and a saponification number less than 280.

(vi) Methyl ester of rosin, partially hydrogenated, purified by steam stripping to have an acid number of 4 to 8, a refractive index of 1.5170 to 1.5205 at

20° C., and a viscosity of 23 to 66 poises at 25° C.

(vii) Pentaerythritol ester of wood rosin, having an acid number of 6 to 16, a drop-softening point of 109° C.-116° C., and a color of M or paler.

(viii) Pentaerythritol ester of partially hydrogenated wood rosin, having an acid number of 7 to 18, a drop-softening point of 102° C.-110° C., and a color of K or paler.

(ix) Pentaerythritol ester of maleic anhydride-modified wood rosin, having an acid number of 8 to 16, a drop-softening point of 154° C.-162° C., a color of M or paler, and having a saponification number less than 280.

(x) Pentaerythritol ester of maleic anhydride-modified wood rosin, having an acid number of 9 to 16, a drop-softening point of 130° C.-140° C., a color of N or paler, and having a saponification number less than 280.

(xi) Pentaerythritol ester of maleic anhydride-modified wood rosin, having an acid number of 134 to 145, a drop-softening point of 127° C.-137° C., a color of M or paler, and having a saponification number less than 280.

(xii) Pentaerythritol ester of maleic anhydride-modified wood rosin, having an acid number of 30 to 40, a drop-softening point of 131° C.-137° C., a color of N or paler, and having a saponification number less than 280.

(xiii) Pentaerythritol ester of maleic anhydride-modified wood rosin, further modified by reaction with 4,4'-isopropylidenediphenol-formaldehyde condensate, having an acid number of 10 to 22, a drop-softening point of 162° C.-172° C., a color of K or paler, a saponification number less than 280, and a maximum ultraviolet absorbance of 0.14 at 296 mμ (using a 1-centimeter cell and 200 milligrams of the rosin ester per liter of solvent consisting of ethyl alcohol made alkaline by addition of 0.1 percent of potassium hydroxide).

(xiv) Mixed methyl and pentaerythritol ester of maleic anhydride-modified wood rosin, having an acid number of 73 to 83, a drop-softening point of 113° C.-123° C., a color of M or paler, and a saponification number less than 280.

(xv) Triethylene glycol ester of partially hydrogenated wood rosin, having an acid number of 2 to 10, a color of K or paler, and a viscosity of 350 to 425 seconds Saybolt at 100° C.

(xvi) Glycerol ester of maleic anhydride-modified wood rosin, having an acid number of 17 to 23, a drop-softening point of 136° C.-140° C., a color of M or paler, and a saponification number less than 280. For use only in cellophane complying with § 121.2507.

(4) Rosin salts and sizes—Ammonium, calcium, potassium, sodium, or zinc salts of rosin manufactured by the partial or complete saponification of gum rosin, wood rosin, tall oil rosin, dark tall oil rosin, dark wood rosin, partially hydrogenated rosin, fully hydrogenated rosin, or disproportionated rosin as identified in subparagraphs (1) and (2) (i), (ii), and (v) of this paragraph, or blends thereof, and with or without modification by reaction with one or more of the following:

(i) Formaldehyde.

(ii) Fumaric acid.

(iii) Maleic anhydride.

(iv) Saligenin.

(b) The quantity used shall not exceed the amount reasonably required to accomplish the intended technical effect.

(c) The use in any substance or article that is the subject of a regulation in this Subpart F shall conform with any specifications and limitations prescribed by such regulation for the finished form of the substance or article.

(d) The provisions of this section are not applicable to rosins and rosin derivatives identified in § 121.2514(b)(3)(v) and used in resinous and polymeric coatings complying with § 121.2514.

(e) The provisions of this section are not applicable to rosins and rosin derivatives identified in § 121.2520(c)(5) and used in defoaming agents complying with § 121.2519, food-packaging adhesives complying with § 121.2520, and rubber articles complying with § 121.2562.

§ 121.2593 Polyvinylidene fluoride resins.

Polyvinylidene fluoride resins may be safely used as articles or components of articles intended for repeated use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, the polyvinylidene fluoride resins consist of basic resins produced by the polymerization of vinylidene fluoride.

(b) The finished food-contact article, when extracted at reflux temperatures for 2 hours with the solvents distilled water, 50 percent (by volume) ethyl alcohol in distilled water, and *n*-heptane, yields total extractives in each extracting solvent not to exceed 0.01 milligram per square inch of food-contact surface tested; and if the finished food-contact article is itself the subject of a regulation in this Subpart F it shall also comply with any specifications and limitations prescribed for it by that regulation. (Note: In testing the finished food-contact article, use a separate test sample for each required extracting solvent.)

(c) In accordance with good manufacturing practice, finished food-contact articles containing the polyvinylidene fluoride resins shall be thoroughly cleansed prior to their first use in contact with food.

§ 121.2594 Odorless light petroleum hydrocarbons.

Odorless light petroleum hydrocarbons may be safely used, as a component of nonfood articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) The additive is a mixture of liquid hydrocarbons derived from petroleum or synthesized from petroleum gases. The additive is chiefly paraffinic, isoparaffinic, or naphthenic in nature.

(b) The additive meets the following specifications:

(1) Odor is faint and not kerosenic.

(2) Initial boiling point is 300° F. minimum.

(3) Final boiling point is 650° F. maximum.

(4) Ultraviolet absorbance limits determined by method specified in § 121.2589(b)(1)(ii), as follows:

Wavelength	Maximum absorbance per centimeter optical pathlength
mμ	
280-289	4.0
290-299	3.3
300-329	2.3
330-360	0.8

(c) The additive is used as follows:

Use	Limitations
As a plasticizer and absorber oil in the manufacture of polyolefin articles authorized for food contact use.	In an amount not to exceed that required to produce intended effect, consistent with good manufacturing practice.
As a lubricant of fibers of textiles authorized for food contact use.	At a use level not to exceed 0.15 percent by weight of finished fibers.
As a component of adhesives.	Complying with § 121.2520.
As a defoamer in the manufacture of paper and paperboard.	Complying with § 121.2519.
As a defoamer in coatings	Complying with § 121.2557.

§ 121.2595 Urea-formaldehyde resins in molded articles.

Urea-formaldehyde resins may be safely used as the food-contact surface of molded articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, urea-formaldehyde resins are those produced when 1 mole of urea is made to react with not more than 2 moles of formaldehyde in water solution.

(b) The resins may be mixed with refined wood pulp and the mixture may contain other optional adjuvant substances which may include the following:

List of substances	*Limitations*
Hexamethylenetetramine	For use only as polymerization-control agent.
Tetrachlorophthalic acid anhydride.	Do.
Zinc stearate	For use as lubricant.

(c) The finished food-contact article, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2514(d), yields total extractives in each extracting solvent not to exceed 0.5 milligram per square inch of food-contact surface as determined by the methods described in § 121.2514(e).

NOTE: In testing the finished food-contact article, use a separate test sample for each required extracting solvent.

§ 121.2596 Sodium pentachlorophenate.

Sodium pentachlorophenate may be safely used as a preservative for ammonium alginate employed as a processing aid in the manufacture of polyvinyl chloride emulsion polymers intended for use as articles or components of articles that contact food at temperatures not to exceed room temperature. The quantity of sodium pentachlorophenate used shall not exceed 0.5 percent by weight of ammonium alginate solids.

§ 121.2597 Acrylic polymer modifiers in semirigid and rigid polyvinyl chloride plastics.

The acrylic polymers identified in paragraph (a) of this section may be safely admixed, alone or in mixture with other permitted polymers, as modifiers in semirigid and rigid polyvinyl chloride plastic articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, the acrylic polymer modifiers are those identified in subparagraphs (1), (2), (3), and (4) of this paragraph: *Provided*, That such polymers contain at least 50 weight-percent of polymer units derived from one or more of the monomers listed in subparagraph (1) of this paragraph.

(1) Homopolymers and copolymers of the following monomers:

n-Butyl acrylate.
n-Butyl methacrylate.
Ethyl acrylate.
Methyl methacrylate.

(2) Copolymers produced by copolymerizing one or more of the monomers listed in subparagraph (1) of this paragraph with one or more of the following monomers:

Acrylonitrile.
Butadiene.
Styrene.
Vinylidene chloride.

(3) Polymers identified in subparagraphs (1) and (2) of this paragraph containing no more than 5 weight-percent of total polymer units derived by copolymerization with one or more of the following monomers:

Acrylic acid.
1,3-Butylene glycol dimethacrylate.
Divinylbenzene.
Methacrylic acid.

(4) Mixtures of polymers identified in subparagraphs (1), (2), and (3) of this paragraph: *Provided*, That no chemical reactions, other than addition reactions, occur when they are mixed.

(b) The polymer content of the finished plastic food-contact article consists of not less than 80 weight-percent of polymer units derived from vinyl chloride and not more than 5 weight-percent of polymer units derived from the acrylic polymers identified in paragraph (a) of this section.

(c) No chemical reactions, other than addition reactions, occur among the acrylic polymers identified in paragraph (a) of this section, the polyvinyl chloride, and any other permitted modifying polymers present in the polymer mixture used in the manufacture of the finished plastic food-contact article.

(d) The finished plastic food-contact article, when extracted with the solvent or solvents characterizing the type of food and under the conditions of time and temperature characterizing the conditions of its intended use as determined from tables 1 and 2 of § 121.2526(c), yields extractives not to exceed the limits prescribed in § 121.2591(b) (1), (2), (3), and (4) when tested by the methods prescribed in § 121.2591(c).

Subpart G—Radiation and Radiation Sources Intended for Use in the Production, Processing, and Handling of Food

AUTHORITY: The provisions of this Subpart G issued under sec. 409, 72 Stat. 1785; 21 U.S.C. 348.

§ 121.3001 Sources of radiation used for inspection of food, for inspection of packaged food, and for controlling food processing.

Sources of radiation for the purposes of inspection of foods, for inspection of packaged food, and for controlling food processing may be safely used under the following conditions:

(a) The radiation source is one of the following:

(1) X-ray tubes producing X-radiation from operation of the tube source at energy levels of 300 kilovolt peak or lower.

(2) Sealed units producing radiations at energy levels of not more than 2.2 million electron volts from one of the following isotopes: Cesium 137, cobalt 60, krypton 85, radium 226, and strontium 90.

(b) To assure safe use of these radiation sources:

(1) The label of the sources shall bear, in addition to the other information required by the Act:

(i) Appropriate and accurate information identifying the source of radiation.

(ii) The maximum energy of radiation emitted by X-ray tube sources.

(2) The label or accompanying labeling shall bear:

(i) Adequate directions for installation and use.

(ii) A statement that no food shall be exposed to a radiation source so as to receive an absorbed dose in excess of 1000 rads.

§ 121.3002 Gamma radiation for the processing and treatment of food.

Gamma radiation for the processing and treatment of food may be safely used under the following conditions:

(a) The radiation source consists of sealed units containing one of the following isotopes: Cesium 137, cobalt 60.

(b) The gamma radiation is used or intended for use as follows:

Irradiated food	Limitations	Use
Canned bacon...	Irradiated in cans coated with polymeric and resinous coatings meeting the specifications in § 121.2514, after packing (with or without a vegetable parchment inner wrap) under vacuum or in an inert atmosphere; absorbed dose: 4.5 to 5.6 megarads.	Radiation preservation.

(c) In the case of radiation used for the preservation of food, a record of the total dose absorbed shall be obtained by the use of phantoms having the same geometry as the containers of food and containing dosimeters suitable for the maintenance of a permanent record of exposure. Measurement of total dose shall be made by use of one phantom per 24-hour period of operation, or by use of one phantom for each 1,000 packages exposed, whichever occurs first, with exposure records being retained for Food and Drug Administration inspection for a period of 1 year.

§ 121.3003 Gamma radiation for the treatment of wheat and potatoes.

Gamma radiation for the treatment of certain foods may be safely used under the following conditions:

(a) The radiation source consists of sealed units containing the isotope cobalt 60 or cesium 137.

(b) The gamma radiation is used or intended for use as follows:

Food for irradiation	Limitation	Use
Wheat and wheat products.	Absorbed dose: 20,000 to 50,000 rads.	Control of insect infestation.
White potatoes.....	Absorbed dose: 5,000 to 15,000 rads.	Inhibit sprout development.

§ 121.3004 Electron beam radiation for the processing of food.

Electron beam radiation for the processing of food may be safely used under the following conditions:

(a) The radiation source consists of an electron accelerator producing a beam of electrons at energy levels not to exceed 10.0 million electron volts.

(b) The electron beam radiation is used or intended for use as follows:

Irradiated food	Limitations	Use
Canned bacon.	Irradiated in cans coated with polymeric and resinous coatings meeting the specifications in § 121.2514, after packing under vacuum or in an inert atmosphere; absorbed dose: 4.5–5.6 megarads. Maximum thickness of food under irradiation: 3.2 cm. with single beam irradiation or 7.0 cm. with cross-firing beams.	Irradiation preservation.

(c) In the case of radiation used for the preservation of food, a record of the total dose absorbed shall be obtained by the use of phantoms having the same geometry as the containers of food and containing dosimeters suitable for the maintenance of a permanent record of exposure. Measurement of total dose shall be made by use of one phantom per 24-hour period of operation or by use of one phantom for each 1,000 packages exposed, whichever occurs first, with exposure records being retained for Food and Drug Administration inspection for a period of 1 year.

(d) In the case of electron beam radiation for the processing of food, a permanent record of the radiation intensity used in the processing shall be made with a recorder coupled to the electron accelerator, and the records shall be retained for Food and Drug Administration inspection for a period of 1 year. Such records shall provide information to identify the cans that have been subjected to the radiation recorded thereon.

§ 121.3005 X-radiation for the processing of food.

X-radiation for the processing of food may be safely used under the following conditions:

(a) The radiation is a beam of X-rays produced by an electron beam from a particle accelerator striking a target, where the electrons do not exceed an energy level of 5 million electron volts.

(b) The X-radiation is used or intended for use as follows:

Irradiated food	Limitation	Use
Canned bacon___	Irradiated in cans coated with polymeric and resinous coatings meeting the specifications in §121.2514, after packing (with or without a vegetable parchment inner wrap) under vacuum or in an inert atmosphere; absorbed dose: 4.5 to 5.6 megarads.	Radiation preservation.

(c) In the case of X-radiation used for the preservation of food, the following permanent records shall be obtained:

Such records shall be identified with the particular lot or batch number involved, and shall be retained for Food and Drug Administration inspection for a period of 1 year.

(1) A record of total dose absorbed, by the use of phantoms having the same geometry as the containers of food, and containing dosimeters suitable for the maintenance of a permanent record of exposure.

(2) A record of the operating intensity of the beam by use of a permanent pen trace of the beam current used.

§ 121.3006 Ultraviolet radiation for the processing and treatment of food.

Ultraviolet radiation for the processing and treatment of food may be safely used under the following conditions:

(a) The radiation sources consist of ultraviolet emission tubes designed to emit wavelengths within the range of 2200-3000 Angstrom units with 90 percent of the emission being the wavelength 2537 Angstrom units.

(b) The ultraviolet radiation is used or intended for use as follows:

Irradiated food	Limitations	Use
Food and food products.	Irradiated with 2,200-3,000 A. emissions, without ozone production; high fat-content food irradiated in vacuum or in an inert atmosphere; intensity of radiation, 1 watt (of 2537 A. radiation) per 5-10 sq. ft.	Surface micro-organism control.
Potable water.	Irradiated with 2,200-3,000 A. emissions, without ozone production; coefficient of absorption, 0.19 per cm. or less; flow rate, 100 gal. per hr. per watt of 2,537 A. radiation; water depth, 1 cm. or less; lamp-operating temperature, 36°-46° C.	Sterilization of water used in food production.

(Sec. 409, 72 Stat. 1785; 21 U.S.C. 348)

Dated: December 20, 1965.

J. K. KIRK,
Assistant Commissioner for Operations.

[F.R. Doc. 65-13706; Filed, Dec. 22, 1965; 8:45 a.m.]

Title 6—AGRICULTURAL CREDIT

Chapter III—Farmers Home Administration, Department of Agriculture

SUBCHAPTER B—LOANS AND GRANTS PRIMARILY FOR REAL ESTATE PURPOSES

[FHA Instruction 444.1]

PART 322—RURAL HOUSING LOANS AND GRANTS

Subpart A—Section 502 Rural Housing Loan Policies, Procedures, and Delegations of Authority

Subpart A, Part 322, Subchapter B, Chapter III, Title 6, Code of Federal Regulations (29 F.R. 7795, 8159) is revised to include provisions for the insurance of section 502 Rural Housing loans, a change in interest rates on certain classes of direct section 502 Rural Housing loans, broadening the purposes for which section 502 Rural Housing loans may be made to certain classes of borrowers, and other changes implementing amendments to Title V of the Housing Act of 1949 effected by Title X of the Housing and Urban Development Act of 1965, so that Subpart A of Part 322 will read as follows:

Sec.
322.1 Scope.
322.2 Objectives.
322.3 Definitions.
322.4 Eligibility requirements.
322.5 Veterans' preference.
322.6 Loan purposes.
322.7 Special requirements.
322.8 Source of funds and rates and terms.
322.9 Technical services.
322.10 Security.
322.11 Processing applications and County Committee certification.
322.12 Preparation of loan docket.
322.13 Loan approval.
322.14 Actions subsequent to loan approval.
322.15 Loan closing actions.
322.16 Rural Housing disaster loans.
322.17 Subsequent section 502 RH loans.

AUTHORITY: The provisions of this Subpart A issued under sections 501, 502, 510, 517, 63 Stat. 432 as amended, 433 as amended, 437, 79 Stat. 498; 42 U.S.C. 1471, 1472, 1480, 1487; Orders of Sec. of Agr., 29 F.R. 16210, 16840, 30 F.R. 14049. Additional authority is cited in parentheses following the sections affected.

§ 322.1 Scope.

This subpart sets forth the policies and procedures, and delegates authority for making insured and direct section 502 Rural Housing (RH) loans under Title V of the Housing Act of 1949.

§ 322.2 Objectives.

The basic objectives of the Farmers Home Administration in making section 502 RH loans are to assist farmowners, owners of other land in rural areas, and senior citizens and other rural residents who will be owners of land in rural areas to obtain decent, safe, and sanitary dwellings and related facilities, and to assist farmowners and owners of other land in rural areas who are engaged in farming to obtain essential farm service buildings and related facilities. The purpose of these loans is to give families who do not have sufficient resources to provide such dwellings, buildings, and facilities on their own account and cannot obtain the necessary credit from other sources on terms and conditions they reasonably can be expected to fulfill, an opportunity to have adequate homes and farm service buildings.

§ 322.3 Definitions.

For purposes of this subpart, the following definitions will apply:

(a) *Farm.* A "farm" includes the total acreage of one or more tracts of land which is owned by the applicant, is operated as a single unit, is in agricultural production, and annually will produce agricultural commodities for sale and home use with a gross value of at least $400 based on 1944 prices.

(b) *Nonfarm tract.* A "nonfarm tract" is a parcel of land that is not a farm or part of a farm and is located in a rural area.

(c) *Rural area.* A "rural area" is either open country, or an incorporated or unincorporated town, village, or other place which has a population not over 5,500 according to the latest figures, is not a part of or associated with an urban area, and is rural in character. A nonfarm tract in a place having a population not over 5,500, is considered located in a rural area if the tract is not situated in any of the following:

(1) A densely settled area near or associated with a place with a population of more than 5,500. In determining whether a densely settled area is near or associated with such a place, the following will be disregarded: minor open spaces due to physical barriers, commercial and industrial developments, parks, and areas reserved for convenience or appearance.

(2) A subdivision of substantial size being developed by commercial interests, unless a large proportion of the residents will obtain most of their income from employment in the surrounding rural area.

(3) A resort area whose seasonal population plus permanent residents numbers over 5,500.

(d) *Owner*. An "owner" includes the following in addition to the owner of full marketable title in fee:

(1) A lessee of a farm where (i) the unexpired term of the lease runs beyond the payment period of the loan and the applicant's equity in the farm leasehold is at least equal to the amount of the loan, (ii) there is a reasonable probability of accomplishing the objectives for which the loan is made, (iii) the applicant can give upon the farm leasehold a recorded mortgage constituting a valid and enforceable lien, (iv) the applicant can comply with loan security requirements specified in this subpart, and (v) the unexpired term of the lease runs for at least 10 years. A lessee of a nonfarm tract is not an "owner."

(2) The owner of an undivided interest in land who is otherwise eligible.

(3) The purchaser under a purchase contract which obligates him to pay the purchase price, gives him the rights of present possession, control, and beneficial use of the property, and entitles him to a deed upon paying all or a specified part of the purchase price.

(4) The holder of a life estate having the usual rights of present possession, control, and beneficial use of the property. A remainderman is not an owner, but will be required to join in executing the mortgage where a mortgage on the farm is required as security and may be required to sign the note if necessary for a sound loan.

(5) Indians owning land in a trust or restricted status as provided in Part 341 of this chapter.

(e) *Mortgage*. A "mortgage" includes any form of security interest in or lien upon any rights or interest in property of any kind.

(f) *Security*. "Security" includes any rights or interests in property subject to a mortgage.

(g) *Real estate*. "Real estate" includes the rights and interests of an owner in a farm or nonfarm tract.

(h) *Rural resident*. A "rural resident" is a person whose permanent residence is or was until recently in a rural area and who after the loan is closed will be the owner-occupant of a nonfarm tract.

(i) *Previously occupied dwelling or building*. A "previously occupied dwelling or building" is a building which (1) has been previously occupied for at least 5 years, or (2) has been occupied for less than 5 years where in the opinion of the State Director it is clear that the building was not built or occupied for the purpose of qualifying it for purchase with an RH loan.

(j) *Minimum adequate site*. A "minimum adequate site" is the smallest area sufficient for (1) the dwelling or farm service buildings and related facilities to be built or purchased, (2) a yard, and (3) production of food for home use only.

(k) *Senior citizen*. A "senior citizen" is a rural resident who is a citizen of the United States and is 62 years of age or over.

(l) *Senior citizen loan*. A "senior citizen loan" is a section 502 Rural Housing direct loan to a senior citizen.

(m) *Cosigner*. A "cosigner" is a comaker of a promissory note who is jointly and severally liable with the borrower.

(n) *Private lender*. A "private lender" is a lender other than the Farmers Home Administration who furnishes the funds with which an insured RH loan is made.

(o) *County Supervisor*. The "County Supervisor" is the County Supervisor or other authorized official in the county office of the Farmers Home Administration for the county in which the farm or nonfarm tract to be improved or purchased with the RH loan lies.

(p) *State Director*. The "State Director" is the State Director or other authorized official in the State Office of the Farmers Home Administration for the State in which the farm or nonfarm tract to be improved or purchased with the RH loan lies.

§ 322.4 Eligibility requirements.

(a) *Applicant*. To be eligible for a section 502 RH loan, the applicant must meet all the following requirements:

(1) Be the owner of a farm or nonfarm tract or a rural resident.

(i) If he applies as the owner of a farm, he must be without decent, safe, and sanitary housing for his own use or for the farm manager, tenants, sharecroppers, or farm laborers, or without farm service buildings essential to a successful farming operation.

(ii) If he applies as the owner of a nonfarm tract, or as a rural resident, he must be without decent, safe, and sanitary housing for his own use, or if the loan is to finance farm service buildings, he must be engaged in farming and be without farm service buildings essential to the success of his farming operations.

(iii) If he applies as a senior citizen, he must be a rural resident who is without an adequate dwelling or related facilities for his own use.

(iv) If the loan is to include funds for land purchase, he must be without a minimum adequate site for necessary adequate buildings.

(2) Be without sufficient resources to provide on his own account the necessary housing, buildings, or related facilities, and be unable to secure the necessary credit from other sources upon terms and conditions which he reasonably could be expected to fulfill. If the applicant has only an undivided interest in the land to be improved, the applicant and his co-owners, other than those whose execution of the mortgage is not required in accordance with § 322.7(j) or § 322.10(b), must, individually and jointly, be unable to provide the improvements with their own resources or obtain the necessary credit elsewhere.

(3) Be a citizen of the United States.

(4) Have assured income sufficient to meet his operating and family living expenses, necessary capital replacements, and payments on debts, including the proposed loan, except that if he is a senior citizen whose income is not sufficient for repayment of the loan, he may qualify for a loan if a person with income which, when added to the applicant's income, will be sufficient to pay the loan will become a cosigner.

(5) Possess the character, ability, and experience to carry out the undertakings and obligations required of him in connection with the loan.

(6) Have training or farming experience necessary to give reasonable assurance of success in any case where the soundness of the loan depends on his farming operations.

(7) Possess legal capacity to incur the obligations of the loan.

§ 322.5 Veterans' preference.

The applications on hand from veterans, and from spouses and children of deceased servicemen, as defined in § 301.5 of this chapter, will be given preference.

(Sec. 507, 63 Stat. 436, as amended; 42 U.S.C. 1477)

§ 322.6 Loan purposes.

(a) A loan may be made to any eligible applicant to—

(1) Construct, improve, or relocate a dwelling to be used as his permanent residence and related facilities on his farm, or on a nonfarm tract he owns or will own after the loan is closed.

(2) Purchase and move to such farm or nonfarm tract a previously occupied dwelling and related facilities, to be used as his permanent residence.

(3) Purchase or install essential equipment which upon installation becomes part of the real estate.

(4) Provide fallout shelters, storm cellars, and similar protective structures.

(5) Provide necessary and adequate sewage disposal facilities for the applicant and his family.

(6) Provide a necessary, adequate, and safe water supply for the applicant and his family.

(7) Provide foundation plantings, seeding or sodding of lawns, and other facilities related to buildings, such as walks, yard fences, and drive ways to building sites located adjacent to a road or street, and, if the applicant is a farmer, paved feed lots.

(8) Pay expenses incident to obtaining plans and making the loan, such as fees for legal, architectural, and other technical services, and reasonable connection fees for water, sewerage, electricity, or gas, which are required to be paid by the borrower and which he cannot pay from other funds. Loan funds also may be used to pay the borrower's share of Social Security taxes for labor hired by the borrower in connection with making the planned building improvements. Loan funds may not be used to pay fees, charges, or commissions, such as "finders' fees" or "placements fees," for the referral of prospective applicants.

(b) A loan may be made to a farmowner for the purposes specified in paragraph (a) of this section and to—

(1) Construct, improve, or relocate a dwelling or farm service building and related facilities on his farm, purchase and move to his farm a previously occupied building, or buy previously occupied buildings and a necessary minimum adequate site, for use by the farmowner or his resident manager, tenant, sharecropper, or farm laborers.

(2) Provide portable-type farm service buildings that do not become a part of the real estate but are necessary to the operation of the farm.

(3) Provide a farmstead water supply and sewage disposal, including such facilities as a well, pump, and farmstead distribution system, which are essential to the health and safety of the occupants of the farm and/or the successful operation of a livestock enterprise conducted on the farm.

(c) A loan may be made to a nonfarm tract owner or a rural resident for the purposes specified in paragraph (a) of this section and to—

(1) Buy for his own use a previously occupied dwelling on a minimum adequate site.

(2) If he is engaged in farming, buy previously occupied farm service buildings and related facilities essential to his farming operations, with or without a minimum adequate site.

(3) Buy a minimum adequate site on which to place a dwelling for his own use and, if he is engaged in farming, a minimum adequate site to accommodate farm service buildings and related facilities which are essential to his farming operations and cannot feasibly be located on land he now owns.

(d) Improvements financed with loan funds must be on land which, after the loan is closed, is part of a farm or nonfarm tract owned by the borrower or on an easement appurtenant to such farm or nonfarm tract.

§ 322.7 Special requirements.

(a) *Supervisory assistance.* Supervision will be provided borrowers to the extent necessary to achieve the objective of the loan and to protect the interests of the Government in accordance with Part 302.

(b) *Supplementary payment agreement.* Form FHA 440-9, "Supplementary Payment Agreement," should be used for each applicant who regularly receives substantial off-farm income. It also should be used for other applicants when needed to facilitate servicing the account.

(c) *Building limitations.* (1) A dwelling financed for an applicant with a low or moderate family income must be modest in size, design, and cost. Adequate housing ordinarily can be provided for such families within less than 1,400 square feet of living area. Living area does not include space such as a patio, carport, garage, porch not suitable for year-round use, unfinished basement, and, if the dwelling does not have a basement, space for utilities such as furnace and hot water heater; however, such space must be kept within reasonable limits and not expanded to circumvent the limitations of this paragraph. When such an applicant has an unusually large family, a somewhat larger house may be justified to provide adequate sleeping space. Furthermore, particular design features or items should not be included in homes of families with low or moderate incomes if such features or items are customarily not included in other adequate but modest homes being built in the area by families with moderate incomes.

(2) A dwelling financed for a family with an income above moderate may be somewhat larger and contain features—such as two complete baths, a family room, or double garage—not usually associated with modest homes. Homes for such families, however, must not be significantly larger or more costly than other adequate homes in the area.

(3) Farm service buildings will not be financed which (i) are excessive in size or design, (ii) have not proved to be suitable for the area, or (iii) are in excess of those economically essential to the farming operations.

(4) Any buildings purchased with RH loan funds must be structurally sound and either be in good repair or placed in that condition with loan funds. Good judgment must be exercised in applying the policies stated in this subsection to previously occupied buildings.

(d) *Refinancing of RH loan.* If, at any time, it appears that the borrower may be able to obtain a refinancing loan from a cooperative or private credit source at reasonable rates and terms for loans for similar purposes and periods of time prevailing in the area, the borrower will, upon request, apply for and accept such refinancing.

(e) *Loan limitations.* No loan will be made if the amount of the loan and the unpaid principal balance plus past-due interest of any other liens against the security as determined by the loan approval official will exceed the normal value of the security or in a note-only case, assets described in § 322.10(d)(3), or if the amount of the loan would exceed the amount certified by the County Committee. See paragraph (j) of this section and § 322.10(b) for requirements applicable to special cases.

(f) *Liens junior to the FHA lien.* A loan will not be made if a lien junior to the RH mortgage likely will be taken simultaneously with or immediately subsequent to closing of the RH loan to secure any debts the borrower may have at the time of loan closing, or any debts he may incur in connection with the RH loan purposes, such as debt for a portion of the purchase price of the land or for money borrowed from others for payments on debts against the property or for part of the construction cost, unless such a lien plus the RH loan and any prior lien will be within the normal value of the security and will not interfere with the purposes of the loan or repayment thereof.

(g) *Restrictions on loans.* Loans will not be made to—

(1) A corporation or cooperative association.

(2) A homestead entryman or desert entryman to improve the entry prior to receipt of a patent.

(3) Pay debts incurred prior to the closing of a loan except fees for legal, architectural, and other technical services. The County Supervisor, not later than the time of planning improvements, will advise each applicant that construction work must not be started, materials must not be ordered nor delivered, and debts for such work or materials must not be incurred before the loan is closed. If, nevertheless, the applicant incurs debts for materials or construction before the loan is closed, the County Supervisor may authorize the use of RH funds to pay such debts only when, after documenting the facts, he finds that all of the following conditions exist:

(i) The debts were incurred after the applicant filed a written application for a loan, except that in the case of a subsequent loan to complete improvements previously planned, the debts were incurred after the initial loan was closed.

(ii) The applicant is unable to pay such debts from his own resources or to obtain credit from other sources and failure to authorize the use of RH funds to pay such debts would impair the applicant's financial position.

(iii) The debts were incurred for authorized section 502 RH loan purposes.

(iv) The construction or repair work conforms to that shown on Form FHA 424-1, "Development Plan," and the total development costs can be paid from funds available.

(4) Refinance indebtedness of an applicant, including any purchase price of real estate for which he is obligated, or any indebtedness against real estate of which the applicant is the owner.

(5) Buy income-producing land or buildings in case of a loan to a rural resident not engaged in farming or to a senior citizen.

(6) An applicant whose debts have been settled pursuant to Part 364 of this chapter, or by release from personal liability under Part 372 of this chapter, as reflected by the County Office records, or where such settlement is contemplated, unless (i) the applicant's failure to pay his loan indebtedness was the result of circumstances beyond his control, (ii) the conditions which necessitated the debt settlement or release, other than weather hazards, disasters, or price fluctuations, have been or will be removed by making the loan, and (iii) the applicant's operations will be sound and afford him a reasonable prospect for repaying the proposed loan and meeting his other obligations.

(7) Purchase land upon which to construct a building, when the applicant already owns land suitable for the purpose.

(h) *Loans on leasehold interests in farms.* A loan secured by a mortgage upon a farm leasehold, if otherwise proper, may be made where the lessor owns the fee simple title marketable in fact and neither the leasehold nor the fee simple title is subject to a prior lien. If in any case involving a prior lien the State Director concludes that a sound loan can be made upon a leasehold, he will submit complete information to the National Office for review and special authorization prior to approval of the loan. Loans may not be made to lessees of nonfarm tracts. With respect to achieving the purpose of the loan, obtaining adequate security, and being able to service the loan and enforce the security, the Government as holder of a mortgage upon a leasehold interest should be in a position substantially as good as if it held a second mortgage on a fee simple title. This includes, besides lessor's consent to the RH mortgage, such matters as—

(1) Reasonable security of tenure. The borrower's interest will not be subject to summary forfeiture or cancellation.

(2) The right to foreclose the RH mortgage and sell without restrictions that would adversely affect the salability of the security. Any effect on market value should be shown in the appraisal.

(3) Right of the Government to bid at foreclosure sale or to accept voluntary conveyance of the security in lieu of foreclosure.

(4) The right of the Government, after acquiring the leasehold through foreclosure or voluntary conveyance in lieu of foreclosure, or in event of abandonment by the borrower, to occupy the property or sublet it, and to sell for cash or credit. In case of a credit sale, a vendor's mortgage may be taken with rights similar to those under the original RH mortgage.

(5) The right of the borrower, in the event of default or inability to continue with the lease and the RH loan, to transfer the leasehold, subject to the RH mortgage, to an eligible transferee with assumption of the RH debt.

(6) Advance notice to the Government of lessor's intention to cancel, terminate, or foreclose upon the lease. Such advance notice will be long enough to permit ascertaining the amount of delinquencies, the total amount of the lessor's and any other prior interest, and the market value of the leasehold interest and, if litigation is involved, referring the case with a report of the facts to the United States Attorney and permitting him to take appropriate action.

(7) Express provisions covering the question of liability of the Government for unpaid rentals or other charges accrued at the time it acquires possession of the property or title to the leasehold, and those which become due during the Government's occupancy or ownership, pending further servicing or liquidation.

(8) Any necessary provisions to assure fair compensation for any part of the premises taken by condemnation.

(9) Any other provisions necessary to meet the foregoing requirements.

(i) *Group service loans.* A section 502 RH loan may be made to a farmowner to enable him to furnish his part of the cost of constructing, remodeling, or repairing a farm service building, such as a dairy barn or storage facility, that will be jointly owned and used by not more than 10 farmers. The following conditions must be met for such a loan to be made:

(1) The group of farmers must act as individuals and not as a legal entity such as a partnership, corporation, or association.

(2) The building will be located in a rural area and provide an essential farm service facility to be used only in connection with the farming operations which the owners of the building conduct on other land.

(3) The applicant will give the Farmers Home Administration a mortgage on his farm including his undivided interest in the tract to be improved with the loan. The interest of other co-owners of the jointly owned building who are not applicants may be excluded from the mortgage upon prior approval by the National Office, as provided in § 322.10(b)(4)(ii).

(4) The owners have written agreements as to the construction and use of the service building.

(5) The service building will not (i) cost more than $50,000 if it is to be constructed new or, (ii) have a depreciated replacement value as improved of more than $50,000 if it is an existing building to be enlarged or improved.

(6) All funds to be used to finance construction of the joint facility will be deposited in the supervised bank account.

(j) *Section 502 RH loans to farm ownership (FO) or soil and water (SW) borrowers.* (1) When an FO or SW borrower's total subsequent credit needs cannot be met with a subsequent FO or SW loan, but can be met with a section 502 RH loan, such a loan may be made if—

(i) The borrower meets the eligibility requirements for a section 502 RH loan and an FO loan or SW loan. However, in an exceptional case an RH loan may be made to an FO borrower who, because of age, physical disability, or death of the spouse, is unable to operate the farm or carry on farming operations, provided a decision has been made to continue with the FO loan.

(ii) The loan, when added to the unpaid principal balance plus past-due interest of any FO, SW, RH, or LH loan plus other debts against the farm or any other security given for a Farmers Home Administration real estate loan or to be given for the section 502 loan, will not exceed $60,000, or the normal value of the security for the loan, whichever is less.

(2) A loan may be made to an FO or SW borrower on the basis of real estate security, nonreal estate security, or a note only.

(3) If a mortgage on the farm will be taken as security, a new appraisal will be prepared when the circumstances outlined in § 322.17(a) exist.

(Sec. 506, 63 Stat. 435, as amended; 42 U.S.C. 1476)

§ 322.8 Source of funds and rates and terms.

(a) *Source of funds.* Direct loan funds will be used for loans to senior citizens, low-income participants in organized self-help housing projects, and families receiving a disaster type of loan. Insured loan funds will be used for all other section 502 RH loans. An insured loan may be made by a private lender or, if one is not available, with funds from the Rural Housing Insurance Fund.

(b) *Interest rate per annum on unpaid principal.* (1) Insured loans to applicants whose family income is above moderate will bear interest at 5¾ percent.

(2) Insured loans to applicants whose family income is low or moderate will bear interest at 5 percent.

(3) Direct loans to senior citizens and to low-income applicants participating in an organized self-help project will bear interest at 4 percent.

(4) Direct loans under the provisions of paragraph XVI to any qualified applicant to replace or repair a building destroyed or damaged because of a natural disaster will bear interest at 3 percent.

(c) *Amortization period.* Each section 502 RH loan will be scheduled for repayment over a period not to exceed 33 years (10 years if not secured by real estate mortgage) from the date of the note or such shorter period as may be necessary to assure that the loan will be adequately secured, taking into account the probable depreciation of the security.

§ 322.9 Technical services.

(a) *Planning and performing development.* The development work will be planned and completed in accordance with Part 304 of this chapter.

(b) *Appraisal.* (1) For a loan exceeding $2,500, the farm or nonfarm tract to be mortgaged as security will be appraised by a Farmers Home Administration employee authorized to make real estate appraisals. If a mortgage will be taken on other real estate as additional security, it will be appraised when it represents a substantial portion of the security for the loan or when requested by the other loan approval official.

(2) For a loan not exceeding $2,500, an appraisal of real estate to be given as security will not be made unless the County Supervisor or loan approval official is uncertain as to the adequacy of the security. If, in such a case, an appraisal is not made by an employee authorized to make real estate appraisals, the County Supervisor will indicate on a separate sheet his estimate of the normal value of the real estate to be given as security.

(3) For security other than real estate, the County Supervisor will list on Form FHA 440-21, "Appraisal of Chattel Property," or State form, if one has been developed, the items to be given as security and his estimate of the normal value of the security. In determining the value of chattel security (except a chattel mortgage on a leasehold), the County Supervisor will take into consideration the length of time the chattels will serve as security and the useful life of such security. In the case of other security, the County Supervisor will include in the appraisal form a supporting statement of his estimated value. Usually this will include a narrative description of the security, its current cash value, the relative stability of the value of the security, and how the security is to be mortgaged or otherwise taken as security for the loan.

(4) In case of a loan to a farm lessee not secured by a mortgage on the leasehold, the County Supervisor will indicate on a separate sheet his estimate of the normal value of the applicant's equity in his leasehold interest.

(c) *Title clearance and legal services.* (1) When real estate will be taken as security (including a mortgage on a farm leasehold), title clearance and legal services for making and closing the loan will be provided in accordance with Part 307 of this chapter. Except for real property to be purchased, the applicant will be requested to furnish title evidence at any time during the loan processing period after the County Supervisor determines that the loan probably will be made. If the County Supervisor is doubtful as to whether the loan will be approved, he will not require the applicant to furnish title evidence until after loan approval. For real property to be acquired, title clearance and legal services will not be requested until the loan is approved.

(2) When a real estate mortgage is not to be taken, the applicant will be required to submit the original or a certified or photostatic copy of his deed, purchase contract, or other instrument evidencing ownership. If the County Supervisor is uncertain as to whether or not the applicant is a qualified owner, he will require the applicant to furnish additional information or obtain the opinion of the Office of the General Counsel as to the evidence of ownership submitted by the applicant and its advice as to any further information or action that may be needed.

(3) When chattels will be taken as security, a lien search will be obtained in accordance with Subpart B of Part 331 of this chapter.

(Sec. 506, 63 Stat. 435, as amended; 42 U.S.C. 1476)

§ 322.10 Security.

(a) *General.* Loans other than those made under paragraph (d) of this section will be adequately secured to protect the interest of the Farmers Home Administration during the scheduled repayment periods.

(1) Any loan of more than $2,500 and any loan scheduled for repayment in more than 10 years from the date of the note will be secured by a real estate mortgage as provided in paragraph (b) of this section.

(2) A loan of not more than $2,500 scheduled for repayment in not more than 10 years from the date of the note may be secured by—

(i) Real estate or chattels; or

(ii) Other security that cannot be converted to cash without jeopardizing the borrower's farming operations or means of livelihood. Examples of such other security are the cash value of life insurance policies, cooperative memberships, income producing leases, and transferable water stocks of security value.

(3) When both real estate and chattel security are taken for a loan with a longer payment period than the maximum period for which the chattel lien will be valid under State law, the loan approval official will determine that the real estate security will be adequate to secure the scheduled unpaid balance of the loan when the chattel lien expires.

(b) *Real estate.* When a real estate mortgage is required, a mortgage will be obtained on all interests in the entire farm or nonfarm tract to be improved, except as provided in this subsection and subject to exceptions and reservations waived under Part 307 of this chapter. Usually such loans will be secured only by real estate. When necessary to supplement the applicant's equity in the farm or nonfarm tract to be mortgaged, or to facilitate servicing the loan, a mortgage also may be taken on other real estate or on chattels or other property owned by the applicant. However, nonreal estate security may not be relied upon for more than $2,500 of the loan.

(1) If the applicant's title to any part of the farm or nonfarm tract is defective (in the sense that it is not good title marketable in fact or that the State law will not recognize a recordable mortgage upon it) and the defect cannot be cured at reasonable cost, the loan may be made subject to the following conditions:

(i) No security value will be accorded to the parcel of real property to which title is defective.

(ii) No improvements to be constructed or repaired with loan funds will be located on the parcel to which title is defective, except that with the prior approval of the National Office, up to $2,500 in loan funds may be used for improvements on such parcel if it is owned by the applicant and if the location of such improvements on such parcel is essential.

(iii) A real estate parcel to which title is defective will be included in the mortgage unless the loan approval official, with the advice of the Office of the General Counsel determines that the applicant's interest cannot be subjected to a recordable mortgage recognized by the State law, or that to include the parcel would unduly complicate loan servicing or liquidation.

(2) A junior mortgage may be taken as security for a loan provided—

(i) The prior mortgage as affected by the State law does not contain such provisions for future advances, payment schedules, forfeiture or cancellation, foreclosure without adequate notice to junior lienholders, or other matters as may jeopardize Farmers Home Administration's security position or the borrower's ability to pay the loan; or

(ii) Such provisions are satisfactorily limited, modified, waived, or subordinated.

(3) When a mortgage is required by paragraph (a)(1) of this section to secure a loan to an applicant as lessee of a farm, a valid and enforceable mortgage on his leasehold interest in the farm will be required. The unexpired term of the lease must be at least 10 years and must extend beyond the repayment period of the loan for a sufficient period to provide a reasonable likelihood that the objectives of the loan will be achieved. The unexpired term of the lease must be at least 50 percent longer than the repayment period of the loan unless, to compensate for a shorter period of the lease beyond the repayment period of the loan, the borrower gives other security of sufficient value, including, for example, a lien upon the borrower's right to receive from his lessor compensation at the expiration of the lease for the unexhausted value of the improvements made with the loan. The mortgage on a leasehold may be supplemented by additional security. Special provisions necessary to protect the Government, such as the items enumerated in § 322.7(h), will be included in the lease, a consent to mortgage, a subordination, or other appropriate instrument executed by the lessor and the borrower.

(4) For a loan to improve a farm or nonfarm tract, or a part thereof, in which the applicant owns only an undivided interest, the interests of all the co-owners will be included in the mortgage, with the following exceptions:

(i) When not required under § 322.7(i)(3).

(ii) When one or more of the co-owners are not legally competent or cannot be located or the ownership rights are divided among such a large number of co-owners that it is not practical for all their interests to be mortgaged, the mortgaging of interests not exceeding 50 percent may be excluded from the security requirements upon prior approval by the National Office of the State Director's recommendation accompanied by a full statement of ownership and conditions which justify the exclusion. In such a case the loan may not exceed the normal value of the equity represented by the interests of the owners who sign the mortgage. In determining such value, consideration will be given to any adverse effect which might result from sale of the mortgaged interests separately from the nonmortgaged interests and from rights of partition accruing to the owners of the nonmortgaged interests. All legally competent co-owners using or occupying the property will be required to sign the mortgage.

(iii) When the applicant for a section 502 RH loan owns the entire interest in a part of the farm and plans to build or improve a residence and related facilities on that part, and owns not less than 50 percent interest in the rest of the farm, a mortgage on the interest of the co-owners may be excluded from the security requirements upon prior approval by the National Office of the State Director's recommendation accompanied by a full statement of ownership and conditions which justify the exclusion, provided the loan will be adequately secured by the normal value of the tract in which the applicant owns the entire interest, the normal value of the jointly owned tract is at least equal to the debts against it and such debts are not liens on the part of the farm in which the applicant owns the entire interest, the joint ownership of a part of the farm and operation of this land by the applicant has been a successful arrangement and is likely to continue to be successful, and no RH funds will be used to construct or improve farm service buildings to be used primarily in connection with the operation of the jointly owned land, and the liens on the jointly owned lands do not include land in which the applicant owns no interest nor secure debts for which the applicant is not liable.

(5) When the applicant is the owner of a life estate qualified under § 322.3,

the remainderman will be required to join in executing the mortgage with the following exception: When one or more of the remaindermen are not legally competent or cannot be located or the remainder rights are divided among such a large number of remaindermen that it is not practicable to obtain the signatures of all the remaindermen, the mortgaging of remainder interests not exceeding 50 percent of the total remainder interest may be excluded from the security requirements upon prior approval by the National Office of the State Director's recommendation accompanied by a memorandum stating complete ownership information and circumstances which justify the exclusion. In such a case the loan may not exceed the normal value of the equity represented by the interests of those who sign the mortgage, determined with due regard to all special adverse factors involved. Remaindermen will be required to sign the note when necessary to a sound loan or to obtain the required security.

(c) *Chattel.* When authorized by paragraph (a) of this section, a mortgage may be taken on selected items of chattel or other nonreal estate security if such a mortgage will not interfere with the applicant's obtaining needed operating credit. When only a chattel mortgage is taken as security for the loan, it ordinarily will be a first lien. In an exceptional case, a mortgage subject only to a first mortgage held by another creditor or the Farmers Home Administration may be taken on chattel property provided the applicant clearly has sufficient mortgageable equity in the chattels to secure the loan.

(d) *Promissory note.* A loan of not more than $1,500 may be made on the basis of the borrower's promissory note without taking other security when—

(1) The applicant has a good reputation for paying his debts promptly;

(2) He is in a strong financial position and will have sufficient income to meet all his obligations; and

(3) The loan approval official determines that, on the basis of normal value, the applicant has equity at least equal to the amount of the proposed loan in assets that would be acceptable as security for the loan.

§ 322.11 Processing applications and County Committee certification.

(a) *Applications.* Applications for section 502 RH loans will be taken on Form FHA 410-1, "Application for FHA Services," and processed in accordance with Part 301 of this chapter. A person who is not a rural resident is not eligible for a loan unless he is the owner of a farm or nonfarm tract.

(1) In every case in which the applicant's family income is above moderate, and in any other case in which there may be any likelihood that the applicant could obtain the credit he needs to supplement his available resources to acquire an adequate dwelling or farm service buildings, the County Supervisor will require the applicant to make a diligent effort to obtain credit from other sources.

(i) Applicants will be expected to apply for credit from lenders engaged in extending long-time housing credit in the area.

(ii) Applicants should be advised to request lenders to indicate the amount and terms of housing credit they might be willing to extend to the applicant.

(iii) When appropriate, the County Supervisor should check on evidence presented by an applicant that he cannot obtain adequate credit elsewhere.

(iv) Letters from the lenders and any other evidence indicating that the applicant is unable to obtain credit elsewhere will be included in the loan docket.

(v) In no case will a loan be made to an applicant who is able to obtain the credit he needs to supplement his available assets at terms he can reasonably be expected to pay to provide a necessary adequate dwelling or necessary adequate farm service buildings.

(2) In any case in which a County Supervisor determines that there is no possibility of the applicant's obtaining adequate housing credit elsewhere and, therefore, does not require the applicant to provide evidence that he has made an effort to obtain such credit, the County Supervisor will record his conclusion and the basis for it in the loan docket.

(b) *Determination of income level of the applicant family.* (1) The County Committee will recommend in each case as to whether the applicant's family income should be considered as being in the "low or moderate" income group or in the "above-moderate" group. This determination will be made after the County Supervisor has had an opportunity to verify the income and financial information submitted by the applicant.

(2) Families in the "low or moderate" income group are those whose income is not significantly greater than the amount needed, considering the size and composition of the family, to enable them to have a reasonable level of living and meet necessary obligations and expenses, including payments on an RH loan to finance a modest home or essential farm service buildings and related facilities.

(3) Families in the "above-moderate" income group are those whose income is above the level needed to meet the requirements specified in subparagraph (2) of this paragraph. As a general rule, these will be families who could, if they were located in an urban area, obtain housing credit from another source.

(4) For an insured RH loan the following will be added as item 7 of Form FHA 440-2, "County Committee Certification."

> 7. For an RH insured loan, we recommend this applicant be considered as being in the (check one) ☐ "low or moderate" or ☐ "above-moderate" income group.

(c) *Certification by County Committee.* Before a loan is approved, the County Committee will make the necessary certifications on Form FHA 440-2. Before executing Form FHA 440-2, the County Committee will consider basic documents such as Form FHA 410-1, Form FHA 431-3, or Form FHA 431-2, and, if applicable, Form FHA 431-1, "Long-Time Farm and Home Plan," Form FHA 424-1, together with the plans and cost estimates for the proposed improvements, the appraisal report, or, when applicable, an estimate of the value of other property to be given as security. If the applicant is a senior citizen and the note is to be cosigned, information required from the cosigner and a statement by the County Supervisor regarding the cosigner also will be considered by the County Committee in making its certification. Members of the Committee may want to interview the applicant and want to see the farm or nonfarm tract on which the loan is to be made.

(1) If the Committee determines that it can make the necessary certification on Form FHA 440-2, the amount of the loan to be shown in the form is that for which the docket has been developed or a lesser amount if the Committee determines that the applicant cannot reasonably be expected to succeed with the loan as proposed.

(2) Ordinarily, the amount of the loan plus any other liens against the security will not be in excess of the recommended normal value of the security as shown on the appraisal report. A loan docket will not be developed when a loan plus any other liens against the security would be significantly in excess of the recommended normal value of the security. In an unusual case when the amount of a loan needed for success plus any other liens that will be against the security is slightly above the recommended normal value of the security and the County Committee and the County Supervisor believe that the loan should be made, Form FHA 440-2 may be completed. In such a case, the completed loan docket will be submitted to the State Office for a determination as to whether it is justifiable to establish the normal value of the security above the appraiser's recommended normal value. If the loan approval official determines that the normal value is in excess of the appraiser's recommended normal value, he will record his determination of the normal value of the security on Form FHA 440-3.

(d) *Optioning of real estate.* If the loan includes funds to purchase real estate, the applicable provisions of FHA Instruction 443.1 regarding options will be followed. In any case in which there is a likelihood of termite infestation or damage to a building being purchased, the following will be inserted in the option form:

> The seller agrees to furnish, at seller's expense, to the buyer a certificate from a reliable firm certifying that the following described building(s) covered by this option (1) is now free of termite infestation, and (2) either is now free of unrepaired termite damage or has suffered unrepaired termite damage which is specifically described in the certificate:
>
> ---
>
> (Describe building(s)).
>
> ---

(Sec. 508, 63 Stat. 436, as amended; 42 U.S.C. 1478)

§ 322.12 Preparation of loan docket.

(a) *Farm and home plans or family budget form.* Form FHA 431-2 will be developed for loans to farmers who depend on farm income for a livelihood. Form FHA 431-1 also will be prepared whenever appropriate. When a loan is to be made to a nonoperator farmowner, the columns in tables B, "Corps, Pasture, Etc.—Production and Sales," and C, "Livestock and Products—Production and Sales," of Form FHA 431-2 pertaining to the operator's share will be changed to owner's share. If an application is being considered early in the crop year for a borrower who has a current Form FHA 431-2, such form will be revised to show changes in the financial statement and significant changes in the planned operations; however, if the crop year is well advanced or completed, a farm and home plan will be developed for the ensuing year. If the applicant does not depend on farm income for a livelihood, Form FHA 431-3 will be used.

(b) *Agreements from prior lienholders.* When the loan is to be secured by a junior real estate mortgage, agreements will be obtained from prior lienholders to any extent necessary to comply with § 322.10(b).

(c) *Information concerning prior mortgage.* The applicant for a loan to be secured by a junior real estate or chattel mortgage will be required to furnish the County Supervisor, before the docket is assembled, a copy of each mortgage held by a prior lienholder and, if available, a copy of each secured note or other obligation. In addition, the County Supervisor will be furnished a current statement signed by the mortgagee showing (1) the amount of unpaid principal secured by the mortgage, (2) the amount of any accrued interest, (3) whether the account is current or the amount of any delinquency, with interest and principal shown separately, and (4) if a copy of the note is not furnished, its maturity date, payment schedule, interest rate, and a summary of any other provisions of the note. All these documents will be included in the docket for the information of the loan approval official. Any cost incident to obtaining them will be paid by the applicant.

(d) *Information about cosigner for a senior citizen loan.* When the note of a senior citizen borrower will be cosigned, information obtained from the cosigner will include a current financial statement, a statement of income and expenses, the nature of his employment, and a brief statement as to his employment history. The information required from the cosigner will be supplemented by a statement by the County Supervisor as to the cosigner's financial condition and reputation for paying his debts and any other information that would be of assistance to the loan approval official in determining the soundness of the loan. This information will be included in the docket.

§ 322.13 Loan approval.

(a) *Delegation of authority.* The State Director is authorized to approve or disapprove loans in accordance with this Subpart A. However, no initial RH or subsequent RH loan may be approved by the State Director without the consent of the National Office if (1) the amount of the loan plus the unpaid principal balance and any past-due interest on liens against the security for the loan and against any other real property of the applicant would exceed $50,000, or (2) the proposed loan, together with the principal balance owed on other Farmers Home Administration loans, would cause the total indebtedness to Farmers Home Administration to exceed $50,000. The loan docket and the State Director's recommendation should be submitted with any request for authority to approve a loan in excess of these limitations. The State Director may redelegate, restrict, or revoke loan approval authority to: State Office employees other than Area Supervisors and to County Supervisors and GS-7 Assistant County Supervisors in accordance with Part 321 of this chapter, except that he may not redelegate below the State Office level authority to approve loans pursuant to § 322.16.

(b) *Approval or disapproval of a loan.* When a loan is approved, the loan approval official will:

(1) Indicate on all copies of Form FHA 440-3 any condition that must be met before the loan is closed and specify the security requirement that the applicant will need to meet, such as a first real estate lien, or a junior lien subject to certain prior liens, and so forth. If title evidence is required in accordance with Part 307 of this chapter or in accordance with any special requirements for the loan but is not included in the docket, the loan may be approved subject to the applicant's furnishing the required title evidence. When the applicant furnishes satisfactory title evidence, the County Supervisor will proceed with processing the loan, except that in those cases in which the title evidence does not comply with the conditions specified by the approval official, the docket will be reconsidered by the loan approval official.

(2) Sign the approval certification on the original and two copies of Form FHA 440-3 and insert his title in the space provided.

(3) For a direct loan or an insured loan from the insurance fund, sign Form FHA 440-1 and insert his title in the space provided.

(4) If a loan is not approved after the docket has been developed, the reasons for such action will be shown on the original Form FHA 440-3, it will be initialed and dated, and the County Supervisor will notify the applicant of the disapproval and the reasons. If the notice was not in writing, the County Supervisor will record in the running record a brief summary of the discussions with the applicant and should advise the County Committee of the action taken on the loan.

§ 322.14 Actions subsequent to loan approval.

(a) *Requesting check.* When the loan has been approved, approval conditions can be met, any necessary curative actions have been taken to provide a satisfactory title to any real estate security, and a date has been set for loan closing, the County Supervisor will order the loan check. However, the check may be requested at the time of loan approval if real estate will not be taken as security or, if real estate is taken as security and satisfactory title evidence is obtained prior to loan approval.

(1) For a direct loan or an insured loan from the insurance fund, if the check is to be ordered at the time of loan approval, the County Supervisor will mark the block in Form FHA 440-3 for issuance of the check and sign and date the portion of the form to request the check. If the check is not ordered at the time of loan approval, a copy of Form FHA 440-3 will be completed after loan approval to request the check in sufficient time to obtain the check prior to the loan closing date. In the latter case if the Form FHA 440-3 sent the Finance Office when the loan was approved showed that the loan was being made from the insurance fund but it is determined that a private lender will furnish the funds for the loan, the copy of Form FHA 440-3 to be sent to the Finance Office to request the check will show that a private lender is available and the insurance fund obligation is to be canceled.

(2) For an insured loan by a private lender, the County Supervisor will request the check by preparing Form FHA 440-7, "Request for Check," in an original and one copy and submit the original to the State Director. If the name of the lender is known, the County Supervisor will enter it on Form FHA 440-7. If the lender does not require attestation of the County Supervisor's signature, the original Form FHA 440-7 may be delivered to the lender and the copy sent to the State Office. In a case where the seller of property being purchased by the borrower is also the insured lender, the amount of check requested will be only for the amount of cash, if any, he will advance. If the bank handling the supervised bank account will require the lender's personal check to clear before disbursing funds, the lender will be requested to furnish a certified or cashier's check. When suitable arrangements can be made with the lender, a bank draft may be used to obtain the loan funds. The lender or his representative may present the check at the time the loan is closed, or, if desired, the check may be mailed to the County Supervisor in sufficient time for closing.

(3) The State Office will take the following action when Form FHA 440-7 is received from the County Office unless the County Supervisor has delivered the original completed Form FHA 440-7 to the lender:

(i) Check or insert the name and address of the lender and see that these entries are correct.

(ii) Attest the signature of the County Supervisor on the original of Form FHA 440-7.

(iii) Forward the original Form FHA 440-7 to the lender.

(b) *Handling loan checks.* (1) For a direct or insured loan, if the loan check is to be deposited in a supervised bank account, this will be done on the date of loan closing in accordance with Part 303 of this chapter after it has been determined that the loan can be closed.

(2) When a private lender issues a loan check payable jointly to the borrower and the Farmers Home Administration, the County Supervisor is authorized to endorse the check on behalf of the Farmers Home Administration at the time of loan closing as follows:

> Endorsed without recourse:
> FARMERS HOME ADMINISTRATION
> By ------------------------
> Title ----------------------

The State Director also is authorized to endorse such a check in the same manner. Authority to endorse such checks in no way relates to or modifies the regulations contained in Part 362 of this chapter regarding collection items or the endorsement of such items.

(3) If a loan check other than a check from a private lender is received and the loan cannot be closed within 21 days from the date of the check, the County Supervisor will take appropriate action in accordance with Part 303 of this chapter.

(4) Where the loan check is received from a private lender, and the loan can be closed but not on the date previously indicated to the lender, the lender will be notified immediately of the reasons for the delay. If it is determined that such a loan cannot be closed, the check will be returned immediately to the lender with a request for cancellation. In no case may a lender's check be retained more than 21 days from the date of the check. When a loan check is lost, mutilated, or destroyed, the County Supervisor will immediately notify the lender and, if the borrower still desires to close the loan, the lender will be requested to issue a new check. When a check is returned to the lender and the loan will be closed at a subsequent date, another check will be requested in the usual manner.

(c) *Cancellation of loan.* Loans may be canceled before loan closing by the use of Form FHA 440-10, "Request for Cancellation of Loan."

(1) For a direct loan or an insured loan from the insurance fund, if a check is received in the County Office, the County Supervisor will return it to the U.S. Treasury, Regional Disbursing Office, Kansas City, Mo., with a copy of Form FHA 440-10.

(2) Any check advanced by a private lender will be returned promptly to the lender with an explanatory letter.

(3) Interested parties will be notified of the cancellation as provided in Part 307 of this chapter.

(d) *Property insurance.* (1) Buildings on the property which is to be taken as security for the loan will be insured in accordance with Part 306 of this chapter.

(2) When a loan is secured by a mortgage on chattels, and the loss of such chattels would jeopardize the interests of the Government, the County Supervisor may require the borrower to insure the chattels against hazards customarily covered by insurance in the area.

§ 322.15 Loan closing actions.

(a) *Review of financial statement.* Just before loan closing, the County Supervisor will review with the applicant the financial statement which was prepared at the time the docket was developed. If there have been significant changes in his financial conditions, the financial statement will be revised and initialed by the borrower and the County Supervisor. When an applicant's financial condition has changed to the extent that it appears that the loan would be unsound or improper, the loan will not be closed. If possible, a revised loan docket will be processed; otherwise, the loan will be canceled.

(b) *Preparation of note and mortgage and loan closing procedure.* Any changes made in the printed or typewritten text of any instrument will be initialed in the margin by all persons signing the instrument.

(1) A loan secured by a real estate mortgage (including a mortgage on a leasehold) will be closed in accordance with Part 307 of this chapter. Real estate mortgage Form FHA 427-2, "Real Estate Mortgage for ---------- (Direct Loan)," will be used for a direct loan, and Form FHA 427-1, "Real Estate Mortgage for ---------- (Insured Loan)," will be used for an insured loan.

(i) For an insured loan on a nonfarm tract, a senior citizen loan on a farm, or a senior citizen loan to purchase a dwelling, an additional covenant will be inserted in the mortgage as follows:

> Borrower will personally occupy and use any buildings on said property which are constructed, improved, or purchased with the loan secured hereby and not rent or lease said buildings unless the Government consents in writing to other occupancy or use or to a rental or lease.

(ii) Any special forms required in connection with a loan on a leasehold will be prepared or approved by the Office of the General Counsel or the State Director.

(iii) For a loan secured by a mortgage upon a leasehold the following language, or similar language which in the opinion of the Office of the General Counsel is legally adequate, will be inserted in the mortgage just before the legal description of the real estate:

> All Borrower's right, title, and interest in and to the leasehold estate for a term of------years beginning on ----------, 19--, created and established by certain Lease dated----------, 19--, executed by---------- as lessor(s), recorded on ----------, 19--, in Book ------, page ------ of the Records of said County and State, and any renewals and extensions thereof, and all Borrower's right, title, and interest in and to said Lease, covering the following real estate:

(iv) For a loan secured by a mortgage upon a leasehold an additional covenant will be inserted in the mortgage to read as follows:

> Borrower will pay when due all rents and any and all other charges required by said Lease, will comply with all other requirements of said Lease, and will not surrender or relinquish, without the Government's written consent, any of Borrower's right, title, or interest in or to said leasehold estate or under said Lease while this instrument remains in effect.

(2) Form FHA 440-16, "Promissory Note (Insured Loan)," will be used for insured loans and Form FHA 440-17, "Promissory Note (Direct Loan)," will be used for direct loans.

(i) The note will be signed in accordance with Part 307 of this chapter.

(ii) The amount of the first installment will be determined by the County Supervisor after considering the immediate debt-paying ability of the borrower. The amount of the first installment may be less, but not more, than a regular annual installment.

(iii) For a direct loan to a borrower participating in an authorized mutual self-help housing project, the initial payment may be scheduled for the second January 1 after the loan is closed if the borrower will be unable to occupy the house by the first January 1. If he will not have sufficient income to pay a full installment by the second January 1, the payment due on the second January 1 may be less than a full installment.

(iv) For an insured loan, the amount of the first installment may not be less than the amount equal to interest on the loan from the date of loan closing to February 1 of the calendar year following the calendar year in which the loan is closed.

(v) In any case in which a real estate mortgage will not be taken, the following provision will be inserted in the note:

> No property constructed, improved, or purchased in whole or in part with the loan may be assigned, sold, transferred, or encumbered, voluntarily or otherwise, without the written consent of the Government.

(vi) When a real estate mortgage will not be taken in the case of a direct loan on a nonfarm tract or a senior citizen loan on a farm, the following provision will be inserted in the note:

> Property constructed, improved, or purchased with the loan will be personally occupied and used by Borrower and not rented or leased, unless the Government gives written consent otherwise.

If the note form already contains a similar printed provision limited to property constructed or improved with an RH loan, the printed provision will be stricken.

(vii) When a senior citizen note is being cosigned, the following sentence will be inserted in the space above the signature and the name of the cosigner will be written in the blank space at the end of the sentence:

> The provisions of this note that the undersigned (a) personally occupy and use the dwelling and (b) refinance from other credit sources shall not apply to ----------.

(3) (i) A loan on security other than real estate will be closed in accordance with § 331.34 except paragraph (a) thereof.

(ii) Nonreal estate security instruments, and related instruments, as appropriate, will be prepared in accordance with Operating Loan instructions regarding security instruments and related instruments except that all provisions for creating a crop lien or security interest will be deleted and for insured loans the Form FHA 440-15, "Security Agreement (Insured Loans to Individuals) (State)," series will be used.

(4) For an insured loan made with a private lender's funds, the promissory note will be assigned to the lender simultaneously with loan closing. This will be done by endorsing the note over to the lender, using the form of endorsement on the reverse of the note. Form FHA 440-5, "Insurance Endorsement (Insured Loans)," will also be executed simultaneously with loan closing for delivery to the lender with the note. If the insurance endorsement is not to provide for purchase by the Government at the holder's option, paragraph 7 will be deleted.

(i) Each County Supervisor and each State Director is authorized to sign the endorsement on the reverse of the note and to execute Form FHA 440-5. The insurance endorsement constitutes the Government's contract of insurance of the loan.

(5) For loans from the insurance fund, the note will not be endorsed and the insurance endorsement will not be prepared until the loan is assigned from the insurance fund to a lender. In such case, the endorsement on the reverse of the note and the insurance endorsement will be executed in accordance with Part 373 of this chapter.

(6) When the first installment on a loan closed during December will be due next January 1, the installment will be collected at the time of loan closing.

(7) Immediately after loan closing, there will be sent to the Finance Office the original note for a direct loan, the original and a copy of the note for an insured loan made from the insurance fund, and a copy of the note and the executed Form FHA 440-5 for an insured loan made by a private lender.

(8) When the real estate mortgage is returned by the filing official, the original will be retained in the borrower's case folder unless it is retained by the filing official for the county records. If the original is retained by the filing official in his official records, a copy conformed to show the recording date including the date and place of recording and the book and page number will be filed in the borrower's case folder. A copy of the mortgage will be delivered to the borrower.

(c) *Other actions.* (1) For assignment of income from real estate security, Form FHA 443-16, "Assignment of Income from Real Estate Security," will be used. If the form is legally inadequate it may be adapted with the approval of the Office of the General Counsel. The County Supervisor, upon the advice of the designated attorney, title insurance company, or Office of the General Counsel, as appropriate, may require the acknowledgment and recordation of the assignment. Any cost incident thereto will be borne by the borrower.

(2) If an owner's policy of title insurance is obtained, it will be delivered to the borrower as soon as it is received from the title insurance company.

(3) A loan secured by a real estate or chattel mortgage is closed when the mortgage is filed for record. In other cases a loan is closed when the loan funds are deposited in the supervised bank account or otherwise made available to the borrower after he executes and delivers the note and any other required instruments.

§ 322.16 Rural Housing disaster loans.

(a) *Eligibility.* When a natural disaster including earthquake, flood, forest fire, severe windstorm, or lightning damages or destroys farm and rural dwellings, farm service buildings, and related facilities, section 502 RH direct loans will be made under this section to eligible RH applicants for the repair or replacement of such buildings on the same or a different site.

(b) *Interest rate.* Loans made under this section will bear interest at 3 percent per year.

(c) *Repair or replacement of buildings.* Repair or replacement of any damaged or destroyed building must be consistent with basic section 502 RH loan policies. Changes may be made in the building, but in any case the repaired or replaced building should not be significantly larger or more costly than the original building except as necessary to provide a building which is adequate but modest. No new building constructed under this paragraph will exceed the limits established by subparagraphs (1) and (3) of § 322.7(c).

(d) *Approval authorization.* The authority to approve rural housing disaster loans will not be redelegated by the State Director below the State Office level. The State Director will approve any disaster loan only after he determines that (1) the loss or damage was due to a natural disaster, (2) the application was filed within 12 months from the date the loss or damage occurred, (3) the applicant is using his available assets, including insurance loss payments, to repair or replace any damaged or destroyed building, (4) the loan will supplement other assistance, such as State or local, Small Business Administration, and Red Cross assistance, to the extent available, and (5) if the applicant is a nonowner occupant, the building he occupied was so badly damaged by the disaster that it is no longer habitable and the owner does not intend to repair or replace the building. Adequate information will be included in the docket to enable the State Director to make the determination required by this subsection.

(e) *Nature of loss.* Each case will be identified by "NATURAL DISASTER" on Form FHA 440-3, in the block, "Source of Funds," and on Form FHA 444-2, beneath the heading. In part D, item III, of Form FHA 444-2, beneath "Use of Funds," "Description of Loss" will be entered and the circumstances surrounding the loss will be fully documented. The cause, nature, and extent of the physical damage, the amount of any insurance loss payments, and the cost of repair or replacement should be recorded.

(f) *Deferred payments.* On loans made under this section, payments of interest and principal may be scheduled so as not to begin for a period up to 5 years from the date of the loan, subject to compliance with all the following conditions:

(1) The applicant, as a result of the loss suffered from the disaster, has had a substantial loss of income or his essential debts, including the proposed RH loan, have increased substantially as a result of the disaster. An applicant who has not experienced an income loss as a result of the natural disaster may not qualify for a deferment if the only additional debts he had to incur was for the repair or replacement of his dwelling.

(2) The income loss or increase in essential debts must be sufficiently great so that the applicant will not likely be able to pay a full annual installment during the proposed deferment period and also meet his other essential obligations.

(3) The applicant's other indebtedness has been adjusted by reduction, reamortization, extension, or other means, to the extent possible by negotiations with the other creditors.

(4) There is adequate evidence that the applicant's income in relation to his total obligations will be sufficient after the deferment period to enable him to meet the payments on the RH loan and all his other obligations.

§ 322.17 Subsequent section 502 RH loans.

(a) Definition: A subsequent section 502 RH loan is a section 502 RH loan made to a borrower who has an existing section 502 RH loan. Subsequent loans may be made for the same purposes and under the same conditions and limitations as initial loans.

(b) Processing subsequent loans: A subsequent loan will be processed in the same manner as initial loans, except that a new appraisal report will be required only when real estate will be taken as security and at least one of the following exists:

(1) The property was not appraised in connection with the initial loan.

(2) The latest appraisal report of the real estate is over 2 years old.

(3) The latest appraisal report is less than 2 years old but the appraiser recommended the normal market value rather than normal value.

(4) The physical characteristics of the property have changed significantly.

(5) The County Supervisor or loan approval official requests a new appraisal report.

(c) Nonreal estate security: A subsequent RH loan may be secured wholly by nonreal estate, provided the amount of the subsequent loan plus the unpaid principal balance of any prior RH loan or loans secuerd by noneral estate does not exceed $2,500.

(d) Note-only: A subsequent RH loan may be made on a note-only basis, provided the amount of the subsequent loan plus the unpaid principal balance of any prior RH loan or loans secured by a note only does not exceed $1,500.

(e) Designation of note in real estate mortgage: When real estate mortgage is required in connection with a subsequent RH loan, any outstanding RH notes will be described in the mortgage.

(f) The subsequent loan will bear interest at a rate determined in accordance with this subpart, which may not be the same rate as borne by the initial loan.

Dated: December 20, 1965.

HOWARD BERTSCH,
Administrator,
Farmers Home Administration.

[F.R. Doc. 65-13714; Filed, Dec. 22, 1965; 8:47 a.m.]

Title 7—AGRICULTURE

Chapter IX—Consumer and Marketing Service (Marketing Agreements and Orders; Fruits, Vegetables, Nuts), Department of Agriculture

PART 907 — NAVEL ORANGES GROWN IN ARIZONA AND DESIGNATED PART OF CALIFORNIA

Expenses and Rate of Assessment

On December 7, 1965, notice of proposed rule making was published in the FEDERAL REGISTER (30 F.R. 15104) regarding proposed expenses and related rate of assessment for the period beginning November 1, 1965, and ending October 31, 1966, pursuant to the marketing agreement, as amended, and Order No. 907, as amended (7 CFR Part 907), regulating the handling of navel oranges grown in Arizona and designated part of California. This regulatory program is effective under the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601–674). After consideration of all relevant matters presented, including the proposals set forth in the aforesaid notice which were submitted by the Navel Orange Administrative Committee (established pursuant to the amended marketing agreement and order), it is hereby found and determined that:

§ 907.204 Expenses and rate of assessment.

(a) *Expenses.* Expenses that are reasonable and likely to be incurred by the Navel Orange Administrative Committee, during the period November 1, 1965, through October 31, 1966, will amount to $290,000.

(b) *Rate of assessment.* The rate of assessment for said period, payable by each handler in accordance with § 907.41, is fixed at $0.01 per carton of navel oranges.

It is hereby found that good cause exists for not postponing the effective time of this action until 30 days after publication in the FEDERAL REGISTER (5 U.S.C. 1001–1011) in that: (1) The relevant provisions of said amended marketing agreement and this part require that the rate of assessment fixed for a particular fiscal year shall be applicable to all assessable navel oranges from the beginning of such year; and (2) the current fiscal year began on November 1, 1965, and the rate of assessment herein fixed will automatically apply to all assessable navel oranges beginning with such date.

(Secs. 1–19, 48 Stat. 31, as amended; 7 U.S.C. 601–674)

Dated: December 20, 1965.

PAUL A. NICHOLSON,
Deputy Director, Fruit and Vegetable Division, Consumer and Marketing Service.

[F.R. Doc. 65-13686; Filed, Dec. 22, 1965; 8:45 a.m.]

PART 917—FRESH PEARS, PLUMS, AND PEACHES GROWN IN CALIFORNIA

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AUTHORITY: The provisions of this Part 917 issued under secs. 1–19, 48 Stat. 31, as amended; 7 U.S.C. 601–674.

§ 917.0 Findings and determinations.

The findings and determinations hereinafter set forth are supplementary, and in addition, to the findings and determinations which were made in connection with the issuance of the order and of each of the previously issued amendments thereto; and all of said previous findings and determinations are hereby ratified and affirmed except insofar as such previous findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) *Findings upon the basis of the hearing record.* Pursuant to the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601–674), and the applicable rules of practice and procedure effective thereunder (7 CFR Part 900), a public hearing was held in Fresno, Calif., on April 5–6, 1965, upon a proposed further amendment of the marketing agreement and order (7 CFR Part 917) regulating the handling of fresh Bartlett pears, plums, and Elberta peaches grown in California. On the basis of the evidence adduced at the hearing, and the record thereof, it is found that:

(1) The said order, as amended and as hereby further amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the act;

(2) The said order, as amended and as hereby further amended, regulates the handling of pears, plums, and peaches grown in the State of California in the same manner as, and is applicable only to persons in the respective classes of industrial and commercial activity, specified in the marketing agreement upon which hearings have been held;

(3) The said order, as amended and as hereby further amended, is limited in its application to the smallest regional production area that is practicable, consistently with carrying out the declared policy of the act; and the issuance of several orders applicable to subdivisions of such regional production area would not effectively carry out the declared policy of the act;

(4) The said order, as amended and as hereby further amended, prescribes,

so far as practicable, such different terms, applicable to different parts of the production area, as are necessary to give due recognition to the differences in production and marketing of the fruit covered thereby; and

(5) All handling of plums grown in the production area is in the current of interstate or foreign commerce or directly burdens, obstructs, or affects such commerce.

(b) *Additional findings.* It is hereby found, on the basis hereinafter indicated, that good cause exists for making the provisions of this amended order effective upon publication in the FEDERAL REGISTER, and that it would be contrary to the public interest to postpone such effective time until 30 days after such publication (5 U.S.C. 1001–1011). The provisions of this order effect changes in the number of positions on the Plum Commodity Committee and in the qualifications of persons to fill such positions and positions on the Peach Commodity Committee. Provisions of the order require that nomination meetings shall be held not later than February 15 to designate nominees for positions on such commodity committees. Therefore, the amended order should be made effective as soon as practicable so that such meetings may be planned and nominations made in accordance with such provisions. The provisions of this order are well known to producers and handlers. The hearing was held at Fresno, California, on April 5–6, 1965, and the recommended decision and final decision were published in the FEDERAL REGISTER on October 14, 1965 (30 F.R. 13063), and November 16, 1965 (30 F.R. 14321), respectively. Copies of the text of the amended order have been made available to all known producers and handlers; the provisions of this order do not impose any restrictions on handlers until regulations in accordance therewith are issued; and compliance with such provisions will not require advance preparation on the part of persons subject thereto which cannot be completed prior to the effective time of such regulations.

(c) *Determinations.* It is hereby determined that:

(1) The "Marketing Agreement, as Amended, Regulating the Handling of Fresh Pears, Plums, and Peaches Grown in California," upon which the aforesaid public hearing was held, has been executed by handlers (excluding cooperative associations of producers who are not engaged in processing, distributing, or shipping the fruit covered by this order) who, during the period March 1, 1964, through February 28, 1965, handled not less than 50 percent of the volume of pears, not less than 50 percent of the volume of plums, and not less than 50 percent of the volume of peaches covered by the said amended order;

(2) The aforesaid Marketing Agreement, as Amended, Regulating the Handling of Fresh Pears, Plums, and Peaches Grown in California has been executed by handlers of the fruit involved in the amendment who were signatory to the Marketing Agreement, as Amended, Regulating the Handling of Bartlett Pears, Plums, and Elberta Peaches Grown in California, and who during the 1964–65 marketing season handled not less than 67 percent of the fruit involved in the amendment which was shipped by all such signatory handlers during such season; and

(3) The issuance of this amended order is favored or approved by at least two-thirds of the respective producers who participated in a referendum on the question of its approval and who, during the determined representative period (March 1, 1965, through October 31, 1965), were engaged, within the production area specified in the aforesaid amended order, in the production for market of fresh pears, plums, and peaches; such producers having also produced for market at least two-thirds of the volume of each fruit represented in such referendum.

It is, therefore, ordered, That, on and after the effective time hereof, all handling of fresh pears, plums, and peaches grown in California shall be in conformity to, and in compliance with, the terms and conditions of the said order, as amended, and as hereby further amended as follows:

DEFINITIONS

§ 917.1 Secretary.

"Secretary" means the Secretary of Agriculture of the United States, or any officer or employee of the Department to whom authority has heretofore been delegated, or to whom authority may hereafter be delegated, to act in his stead.

§ 917.2 Act.

"Act" means Public Act No. 10, 73d Congress (May 12, 1933), as amended, and as reenacted and amended by the Agricultural Marketing Agreement Act of 1937, as amended (48 Stat. 31, as amended; 7 U.S.C. 601–674).

§ 917.3 Person.

"Person" means an individual, partnership, corporation, association, or any other business unit.

§ 917.4 Fruit.

"Fruit" means the edible product of the following three kinds of trees (a) all varieties of plums, (b) the varieties of pears, and (c) the varieties of peaches set forth below together with all mutations thereof which are grown in the production area and shipped in fresh form:

Pears. Bartlett, Dr. Jules Guyot (Guyot, Early Bartlett), Clapps Favorite (Hill Bartlett), Max-Red (Max-Red Bartlett, Red Bartlett), Rosired (Rosired Bartlett), Winter Bartlett, Gorham (Late Bartlett).

Peaches. Elberta (Regular Elberta), Early Elberta (Gleason, Early Fay, Golden Elberta), Fay Elberta (Gold Medal, Golden Elberta), Burbank July Elberta (Early Elberta, Burbank Elberta, Burbank, Jewel, Kim Elberta, July Elberta, Socala).

§ 917.5 Grower.

"Grower" is synonymous with producer and means (a) with respect to plums any person who produces plums for market in fresh form, and who has a proprietary interest therein, and (b) with respect to pears and peaches, any person who produces such for market in fresh form in the current of interstate or foreign commerce, and who has a proprietary interest therein.

§ 917.6 Handle.

"Handle" and ship are synonymous and mean: (a) With respect to pears and peaches, to sell, consign, deliver, or transport such fruit, or cause such fruit to be sold, consigned, delivered, or transported, between the production area and any point outside thereof; and (b) with respect to plums, to sell, consign, deliver, or transport plums, or cause plums to be sold, consigned, delivered, or transported, between the production area and any point outside thereof, or within the production area: *Provided,* That the term handle shall not include the sale of fruit on the tree, the transportation within the production area of fruit from the orchard where grown to a packing facility located within such area for preparation for market, or the delivery of such fruit to such packing facility for such preparation.

§ 917.7 Handler.

"Handler" is synonymous with shipper and means any person (except a common or contract carrier transporting fruit owned by another person) who handles fruit.

§ 917.8 Commercial plum handler.

"Commercial plum handler" means any person who produces less than 50% of the plums which he handles.

§ 917.9 Fiscal period.

"Fiscal period" is synonymous with fiscal year and means the 12-month period ending on the last day of February of each year, or such other period that may be approved by the Secretary pursuant to recommendations by the committee.

§ 917.11 Production area.

"Production area" means the State of California.

§ 917.12 Container.

"Container" means a box, bag, crate, lug, basket, carton, package, or any other type of receptacle used in the packaging or handling of fruit.

§ 917.13 Pack.

"Pack" means the specific arrangement, size, weight, count, or grade of a quantity of fruit in a particular type and size of container or any combination thereof.

§ 917.14 District.

"District" means any of the following subdivisions of the State of California:

(a) "North Sacramento Valley District" includes and consists of Glenn County, Shasta County, Tehama County, Modoc County, Siskiyou County, Lassen County, Plumas County, and Colusa County.

(b) "Central Sacramento Valley District" includes and consists of Sutter County, Butte County, Yuba County, and Sierra County.

(c) "Sacramento River District" includes and consists of Sacramento County, that portion of Yolo County east of a straight line from the northwest corner of Sacramento County to the Northeast corner of Solano County, and that portion of Solano County east of a straight line from the northeast corner of Solano County to the town of Rio Vista.

(d) "El Dorado District" includes and consists of El Dorado County.

(e) "Placer-Colfax District" includes and consists of Nevada and Placer Counties.

(f) "Solano District" includes and consists of that portion of Yolo County not included in the Sacramento River District, and that portion of Solano County not included in the Sacramento River District.

(g) "Contra Costa District" includes and consists of Contra Costa County.

(h) "Santa Clara District" includes and consists of Alameda County, Monterey County, Santa Clara County, San Mateo County, Santa Cruz County, and San Benito County.

(i) "Lake District" includes and consists of Lake County.

(j) "Mendocino District" includes and consists of Mendocino County, Humboldt County, Trinity County, and Del Norte County.

(k) "South Coast District" includes and consists of San Luis Obispo County, Santa Barbara County, Ventura County, and that portion of Los Angeles County south of the Tehachapi Mountains and west of a straight line running from the town of Saugus to Point Fermin.

(l) "Stockton District" includes and consists of San Joaquin County, Amador County, Calaveras County, and Alpine County.

(m) "Stanislaus District" includes and consists of Merced County, Stanislaus County, Tuolumne County, and Mariposa County.

(n) "Fresno District" includes and consists of Madera County, Fresno County, Mono County, Kings County, and that portion of Tulare County north of the 4th Standard Parallel south of the Mount Diablo Base Line of the General Land Office.

(o) "Tulare District" includes and consists of that portion of Tulare County not included in Fresno District.

(p) "Kern District" includes and consists of that portion of Kern County west of the Tehachapi Mountains.

(q) "Tehachapi District" includes and consists of that portion of Los Angeles County north of the San Gabriel Mountains and north of that portion of Kern County not included in Kern District, and Inyo County.

(r) "Southern California District" includes and consists of San Bernardino County, Orange County, San Diego County, Imperial County, Riverside County, and that portion of Los Angeles County not included in the South Coast District and the Tehachapi District.

(s) "North Bay District" includes and consists of Sonoma County, Napa County, and Marin County.

§ 917.15 Representation area.

"Representation area" means any one of the districts or groups of districts which are designated for nominating members and alternate members to the commodity committees under §§ 917.21 through 917.23 or as changed pursuant to § 917.34(i)

ADMINISTRATIVE BODIES

§ 917.16 Designation of Control Committee.

A Control Committee is hereby established consisting of 12 shipper members and 13 grower members, and the members shall be selected in accordance with the provisions of § 917.17 through § 917.19. The members shall be selected annually for a term ending on the last day of February, and said members shall serve until their respective successors are selected and qualified.

§ 917.17 Nomination of shipper members of the Control Committee.

Nominations for the 12 members of the Control Committee to represent shippers shall be made in the following manner:

(a) Elective bodies may be formed consisting of any shipper or group of shippers who shipped at least one-third of the total tonnage of fruit shipped by all shippers during the preceding season. Each elective body shall be entitled to nominate four persons for members. In the event an elective body is composed of more than one shipper, each such shipper shall cast his vote on the basis of fruit shipped by such shipper during the previous season. Voting shall be cumulative. Shippers who have sufficient tonnage to form one or more elective bodies shall not be entitled to use their additional fractional tonnage, if any, toward the formation of an additional elective body.

(b) In the event all nominations for the shipper membership of the Control Committee are not made by elective bodies, as provided in paragraph (a) of this section, by February 1 of each year, the then existing Control Committee shall promptly announce a time and place for a meeting of all shippers of fruit who have not individually or collectively formed an elective body nor in any manner participated therein, and such Control Committee shall conduct the election of nominees at such meeting. At said election meeting, such shippers shall select a nominee for each of the aforesaid positions of the Control Committee for which nominees have not been selected pursuant to the provisions of paragraph (a) of this section. In such election, each such shipper shall cast only one vote. No shipper who formed an elective body, or participated therein with another shipper or shippers, shall participate in or vote at such election held pursuant to the provisions of this paragraph.

(c) No shipper shall be entitled to participate in the nomination of members of the Control Committee, or be eligible for membership on such committee, if such shipper has failed to pay the assessments, due to be paid by him pursuant to the provisions of § 917.37.

§ 917.18 Nomination of grower members of the Control Committee.

Nominations for the 13 members of the Control Committee to represent growers shall be made by the commodity committees in the following manner:

(a) A nomination for one member shall be made by each commodity committee selected pursuant to § 917.25. Nominations for the remaining members to represent growers shall be made by the respective commodity committees as provided in this section. The number of remaining members which each respective commodity committee shall be entitled to nominate shall be based upon the proportion that the previous three fiscal periods' shipments of the respective fruit is of the total shipments of all fruit to which this part is applicable during such periods. In the event provisions of this part are terminated as to any one fruit, nominations of members to the Control Committee shall be composed of representatives of the remaining two fruits. The apportionment shall be determined as aforesaid. In the event provisions of this part are terminated as to any two fruits, the members of the commodity committee of the remaining fruit shall have all of the powers, duties, and functions given to the Control Committee under this part and sections of this part pertaining to the designation of the Control Committee shall be terminated.

(b) A person nominated by any commodity committee for membership on the Control Committee shall be an individual person who produced fruit during the previous season: *Provided, however*, That a person nominated by any commodity committee for membership on the Control Committee shall have the qualifications specified in § 917.24(c). Each member of each commodity committee shall have only one vote in the selection of nominees for membership on the Control Committee.

§ 917.19 Selection of members of the Control Committee.

From the nominations made pursuant to § 917.17, or from other persons, the Secretary shall select the shipper members of the Control Committee. From the nominations made pursuant to § 917.18, or from other persons, the Secretary shall select the grower members of the Control Committee. Any person selected as a member of the Control Committee shall qualify by filing with the Secretary a written acceptance of the appointment.

§ 917.20 Designation of members of commodity committees.

There are hereby established a Pear Commodity Committee and a Plum Commodity Committee each consisting of 12 members, and a Peach Commodity Committee consisting of 7 members. The members of each commodity committee shall be selected annually for a term ending on the last day of February, and such members shall serve until their respective successors are selected and have qualified. The members of each commodity committee shall be selected in accordance with the provisions of § 917.25.

§ 917.21 Nomination of Pear Commodity Committee members.

Nominations for membership on the Pear Commodity Committee shall be made by the growers of pears in the respective representation areas as follows:

(a) North Sacramento Valley District and the Central Sacramento Valley District one nominee.

(b) Sacramento River District, Stockton District, Contra Costa District, Santa Clara District, and Solano District three nominees.

(c) Placer-Colfax District one nominee.

(d) Lake District four nominees.

(e) Mendocino District and the North Bay District one nominee.

(f) El Dorado District and all of the area not included in the North Sacramento Valley District, Central Sacramento Valley District, Placer-Colfax District, Sacramento River District, Stockton District, Solano District, Contra Costa District, Santa Clara District, Lake District, Mendocino District, and North Bay District two nominees.

§ 917.22 Nomination of Peach Commodity Committee members.

Nominations for membership on the Peach Commodity Committee shall be made by the growers of peaches in the respective representation areas, as follows:

(a) Fresno District four nominees.

(b) Tulare District and Kern District one nominee.

(c) Stanislaus District one nominee.

(d) All of the production area not included in the Fresno District, Tulare District, Kern District, and Stanislaus District one nominee.

§ 917.23 Nomination of Plum Commodity Committee members.

Nominations for membership on the Plum Commodity Committee shall be made by the growers of plums in the respective representation areas, as follows:

(a) Kern District and the Southern California District one nominee.

(b) Tulare District two nominees.

(c) Fresno District five nominees.

(d) Placer-Colfax District two nominees.

(e) North Sacramento Valley District and Central Sacramento Valley District one nominee.

(f) All of the production area not included in the Kern District, Southern California District, Tulare District, Fresno District, Placer-Colfax District, North Sacramento Valley District, and Central Sacramento Valley District one nominee.

§ 917.24 Procedure for nominating members of various commodity committees.

(a) The Control Committee shall hold or cause to be held not later than February 15 of each year a meeting or meetings of the growers of the fruits in each representation area set forth in §§ 917.21, 917.22, and 917.23 for the purpose of designating nominees of the commodity committees. These meetings shall be supervised by the Control Committee, which shall prescribe such procedure as shall be reasonable and fair to all persons concerned.

(b) With respect to each commodity committee only growers of the particular fruit who are present at such nomination meetings or represented at such meetings by duly authorized employees may participate in the nomination and election of nominees for commodity committee members. Each such grower, including employees of such grower, shall be entitled to cast but one vote for each position to be filled for the representation area in which he produces such fruit.

(c) A particular grower, including employees of such growers, shall be eligible for membership as principal or alternate to fill only one position on a commodity committee. A grower nominated for membership on the Pear Commodity Committee must have produced at least 51 percent of the pears shipped by him during the previous fiscal period, or he must represent an organization which produced at least 51 percent of the pears shipped by it during such period. A grower nominated for membership on the Plum Commodity Committee may be a producer who has a proprietary interest in or is an employee of a commercial plum handler: *Provided*, That at least one such nominee from each representation area shall be a producer who does not have a proprietary interest in or is not an employee of a commercial plum handler.

§ 917.25 Selection of members of various commodity committees.

The Secretary shall select the members of each commodity committee from nominations made by growers, as provided in §§ 917.21 through 917.24, or from among other eligible persons. Any person selected as a member of a commodity committee shall qualify by filing with the Secretary a written acceptance of the appointment.

§ 917.26 Failure to nominate.

If nominations are not made within the time and in the manner prescribed in §§ 917.21 through 917.24, the Secretary may, without regard to nominations, select the members and alternate members of the commodity committees on the basis of the representation provided in §§ 917.21 through 917.23. In the event nominations are not made for membership on the Control Committee, pursuant to the provisions of §§ 917.17 and 917.18, by May 1 of each year, the Secretary may select such members without waiting for nominees to be designated.

§ 917.27 Alternates.

There shall be an alternate for each member of the Control Committee, and an alternate for each member of each commodity committee. Each such alternate shall possess the same qualifications, shall be nominated and selected in the same manner and shall hold office for the same term, as the member for whom he is alternate. An alternate shall, in the event of such member's absence at a meeting of the committee, act in the place and stead of such member; and, in the event of such member's removal, resignation, disqualification, or death, the alternate for such member shall, until a successor for the unexpired term of said member has been selected, act in the place and stead of said member. In the event both a member and his alternate are unable to attend a meeting the member or the committee members present may designate any other alternate to serve in such member's place and stead provided such action is necessary to secure a quorum.

§ 917.28 Procedure for filling vacancies on committees.

To fill any vacancy on the Control Committee or on any of the commodity committees occasioned by the failure of any person selected as a member or as an alternate member to qualify, or in the event of the death, removal, resignation, or disqualification of any member or alternate member, a successor for the unexpired term of such member or alternate shall be nominated and selected in the manner specified in §§ 917.17 through 917.19, and §§ 917.21 through 917.25. If the names of nominees to fill any such vacancy are not made available to the Secretary within a reasonable time after such vacancy occurs, the Secretary may fill such vacancy without regard to nominations on the basis of representation provided for in §§ 917.16 and 917.21 through 917.23.

§ 917.29 Organization of committees.

(a) A majority of all of the members of the Control Committee shall constitute a quorum, and any action of the Control Committee shall require the concurrence of the majority of all members present at the meeting.

(b) A quorum of the Pear Commodity Committee and of the Plum Commodity Committee shall each consist of eight members; and a quorum of the Peach Commodity Committee shall consist of five members.

(c) The Control Committee and each commodity committee shall give to the Secretary the same notice of each meeting that is given to the members of the respective committee.

(d) The Control Committee or any commodity committee may, upon due notice to all of the members of the respective committee, vote by letter, telegraph, or telephone: *Provided*, That any member voting by telephone shall promptly thereafter confirm in writing his vote so cast.

§ 917.30 Removal and disapproval.

The members of the Control Committee, including their respective successors and alternates, and the members of each commodity committee, including their respective successors and alternates, and any agent or employee appointed or employed by the Control Committee and the members of any other committee established pursuant to the provisions of this subpart shall be subject to removal or suspension at any time by the Secretary. Each regulation, decision, determination, or other act of the Control Committee, or any commodity committee, or any other committee established pursuant to the provisions of this subpart, shall be subject to the continuing right of the Secretary to disapprove of the same at any time; and, upon such disapproval, each such regulation, decision, determination, or other act, shall be deemed null and void except as to acts done in reliance thereon or in compliance therewith prior to such disapproval by the Secretary.

§ 917.31 Compensation and expenses.

All committee members shall serve without compensation, but said members, and their respective alternates, shall be reimbursed for expenses necessarily incurred in the performance of their duties. At its discretion any committee may request the attendance of one or more alternates at any or all meetings, notwithstanding the expected or actual presence of the respective members, and may pay expenses as aforesaid.

§ 917.32 Funds and other property.

(a) All funds received by the Control Committee, pursuant to the provisions of this part, shall be used solely for the purpose specified in this part; and the Secretary may require the Control Committee and its members to account for all receipts and disbursements.

(b) Upon the resignation, removal, or expiration of the term of any member or employee of the Control Committee, or of any member of any commodity committee, all books, records, funds, and other property in his possession belonging to the Control Committee or any commodity committee shall be delivered to the Control Committee or to his successor in office; and such assignments and other instruments shall be executed as may be necessary to vest in the Control Committee full title to all the books, records, funds, and other property in the possession or under the control of such member or employee, pursuant to the provisions of this part.

(c) The Control Committee may, with the approval of the Secretary, maintain in its own name, or in the name of its members, a suit against any shipper for the collection of such shipper's pro rata share of expenses, pursuant to the provisions of this part.

§ 917.33 Powers of Control Committee.

The Control Committee shall have the following powers:

(a) To administer, as specifically provided in this part, the terms and provisions of this part.

(b) To make administrative rules and regulations in accordance with and to effectuate the terms and provisions of this part.

(c) To receive, investigate, and report to the Secretary complaints of violations of the provisions of this part.

(d) To recommend to the Secretary amendments to this part.

§ 917.34 Duties of Control Committee.

The Control Committee shall have the following duties:

(a) To act as intermediary between the Secretary and any grower or shippers.

(b) To keep minute books and records which will clearly reflect all of the acts and transactions of said Control Committee; and such minute books and records shall be subject at any time to examination by the Secretary or by such person as may be designated by the Secretary.

(c) To investigate, from time to time, and assemble data on the growing, shipping, and marketing conditions respecting fruit, as defined in § 917.4; to engage in such research and service activities in connection with the handling of such fruit as may be approved, from time to time, by the Secretary; and to furnish to the Secretary such available information as may be requested.

(d) To appoint such employees, agents, and representatives as it may deem necessary, and to determine the compensation and define the duties of each.

(e) To submit as soon as practicable after the beginning of each fiscal period to the Secretary, for his approval, a budget of its expenses for such fiscal period, including a report in explanation of the items therein, and a recommendation as to the rate of assessment for each fruit.

(f) To confer with representatives of shippers and growers of fruit produced in other states and areas with respect to the formulation or operation of marketing agreements providing for the regulation of shipments among the several states and areas in the United States in which such fruit is grown.

(g) To establish a Sales Managers' Committee of seven members for each of the fruits regulated under this part to assist the respective commodity committees in arriving at recommendation for regulation. The members of the Sales Managers' Committees shall be selected by the shipper members of the Control Committee.

(h) To establish and define the duties of additional committees or subcommittees to assist in the performance of any of the duties and functions of the Control Committee.

(i) With the approval of the Secretary, to redefine the districts into which the State of California has been divided under § 917.14 or change the representation of any representation area on any commodity committee: *Provided, however*, That, if any such changes are made, representation on any such committee from the various representation areas shall be based, so far as practicable, upon the proportionate quantity of the respective fruit shipped from the respective representation area during the preceding three fiscal periods: *Provided further*, That the Control Committee shall follow the principle, so far as practicable, of assigning a member position on the Pear and Plum Commodity Committees to any representation area from which 5 percent of regulated shipments have originated during such periods.

(j) To defend all legal proceedings against any committee members (individually or as members) or any officers or employees of such committees arising out of any act or omission made in good faith pursuant to the provisions of this part.

(k) To cause the books of the Control Committee to be audited by a competent accountant at least once each fiscal period and at such other time or times as the Control Committee may deem necessary or as the Secretary may request. Such audit shall indicate whether the funds have been received and expended in accordance with the provisions of this part.

(l) To appoint nomination committees if it deems proper for any or each nomination meeting held pursuant to §§ 917.21 through 917.23. Such nomination committees would canvas prospective members and alternate members to the commodity committees to determine their eligibility and willingness to serve and present a slate of nominees to the meeting or meetings. The presentation of nominees by the nominating committee at these meetings shall not exclude the right of any grower to nominate any eligible person at such meeting.

§ 917.35 Powers and duties of each commodity committee.

Each commodity committee shall have the following powers and duties:

(a) With regard to the respective fruit for which it was established, to recommend to the Secretary regulation of shipments pursuant to the provisions of this part, and to possess such other powers and exercise such other duties as will properly effectuate the purposes of this part: *Provided, however*, That the Pear and Plum Commodity Committees shall each make said recommendation pursuant to §§ 917.40 through 917.43 only upon the affirmative vote of not less than eight members of each said committee: *Provided further*, That the Peach Commodity Committee shall make said recommendation pursuant to such sections only upon the affirmative vote of not less than five members of said committee.

(b) To make such rules and regulations with respect to fruit for which it was established as may be necessary to effectuate the terms and provisions of this part.

(c) To forward to the Control Committee and to the Secretary a record of the minutes of each meeting of the commodity committee.

(d) To establish such other committees to aid the commodity committee in the performance of its duties under this part as may be deemed advisable.

(e) Each season prior to any recommendation to the Secretary for a regulation of shipments pursuant to §§ 917.40 through 917.43 to determine the marketing policy to be followed for the respective commodity during the ensuing fiscal period and to submit such policy to the Secretary, said policy report to contain, among other provisions, information relative to the estimated total production and shipments of the fruit by districts, information as to the expected general quality and size of fruit, possible or expected demand conditions of different market outlets, supplies of competitive commodities, such analysis of the foregoing factors and conditions as the committee deems appropriate, and the type of regulations of shipments expected to be recommended for the respective fruit.

EXPENSES AND ASSESSMENTS

§ 917.36 Expenses.

The Control Committee is authorized to incur such expenses as the Secretary may find are reasonable and are likely to be incurred by the Control Committee during each fiscal period for maintenance and functioning of such committee and the respective commodity committees and for such research and service activities relating to the handling of fruit as the Secretary may determine to be appropriate. The funds to cover such expenses shall be acquired by the levying of assessments as provided in § 917.37.

§ 917.37 Assessments.

(a) As his pro rata share of the expenses which the Secretary finds are reasonable and are likely to be incurred by the Control Committee during a fiscal period, each handler shall pay to the committee, upon demand, assessments on all fruit handled by him. The payment of assessments for the maintenance and functioning of the committees may be required under this part throughout the period it is in effect irrespective of whether particular provisions thereof are suspended or become inoperative.

(b) The Secretary shall fix the respective rate of assessment which handlers shall pay with respect to each fruit during each fiscal period in an amount designed to secure sufficient funds to cover the respective expenses which may be incurred during such period. At any time during or after the fiscal period, the Secretary may increase the rates of assessment in order to secure funds to cover any later findings by the Secretary relative to such expenses, and such increase shall apply to all fruit shipped during the fiscal period.

(c) In order to provide funds to carry out the functions of the Control Committee and commodity committees prior to the commencement of shipments in any season, shippers may make advance payments of assessments, which advance payments shall be credited to such shippers and the assessments of such shippers shall be adjusted so that such assessments are based upon the quantity of fruit shipped by such shippers during such season. Any shipper who ships fruit for the account of a grower may deduct, from the account of sale covering such shipment or shipments, the amount of assessment levied on said fruit shipped for the account of such grower.

§ 917.38 Accounting.

If, at the end of a fiscal period the assessments collected are in excess of expenses incurred, the Control Committee, with the approval of the Secretary, may carry over such excess into subsequent fiscal periods as a reserve: *Provided*, That funds already in the reserve do not exceed approximately one fiscal period's expenses. Such reserve funds may be used (1) to cover any expenses authorized by this part and (2) to cover necessary expenses of liquidation in the event of termination of this part. If any such excess is not retained in a reserve, each handler entitled to a proportionate refund shall be credited with such refund against the operations of the following fiscal period or be paid such refund. Upon termination of this part, any funds not required to defray the necessary expenses of liquidation shall be disposed of in such manner as the Secretary may determine to be appropriate: *Provided*, That, to the extent practical, such funds shall be returned pro rata to the persons from whom such funds were collected.

RESEARCH

§ 917.39 Market research and development.

The committees, with the approval of the Secretary, may establish or provide for the establishment of marketing research and development projects designed to assist, improve, or promote the marketing, distribution, and consumption of fruit. The expense of such projects shall be paid from funds collected pursuant to § 917.37.

REGULATIONS

§ 917.40 Recommendations for regulations.

(a) Whenever a commodity committee deems it advisable to regulate the handling of any variety or varieties of fruit in the manner provided in § 917.41, it shall so recommend to the Secretary.

(b) In arriving at its recommendations for regulation pursuant to paragraph (a) of this section, the commodity committee shall give consideration to current information with respect to the factors affecting the supply and demand for such fruit during the period or periods when it is proposed that such regulation should be made effective. With each such recommendation for regulation, the commodity committee shall submit to the Secretary the data and information on which such recommendation is predicated and such other available information as the Secretary may request.

§ 917.41 Issuance of regulations.

(a) The Secretary shall regulate, in the manner specified in this section, the handling of any variety or varieties of fruit whenever he finds, from the recommendations and information submitted by the commodity committee, or from other available information, that such regulations will tend to effectuate the declared policy of the act. Such regulations may:

(1) Limit, during any period or periods, the total quantity of any grade, size, quality, maturity, or pack, or any combination thereof, of any variety or varieties of fruit;

(2) Limit the shipment of any variety or varieties of fruit by establishing, in terms of grades, sizes, or both, minimum standards of quality and maturity during any period when season average prices are expected to exceed the parity level;

(3) Fix the size, capacity, weight, dimensions, markings, or pack of the container, or containers, which may be used in the packaging or handling of any fruit;

(b) The commodity committee shall be informed immediately of any such regulation issued by the Secretary, and the commodity committee shall promptly give notice thereof to handlers.

§ 917.42 Modification, suspension, or termination of regulations.

(a) In the event the commodity committee at any time finds that, by reason of changed conditions, any regulations issued pursuant to § 917.41 should be modified, suspended, or terminated, it shall so recommend to the Secretary.

(b) Whenever the Secretary finds, from the recommendations and information submitted by the commodity committee or from other available information, that a regulation should be modified, suspended, or terminated with respect to any or all shipments of fruit in order to effectuate the declared policy of the act, he shall modify, suspend, or terminate such regulation. If the Secretary finds that a regulation obstructs or does not tend to effectuate the declared policy of the act, he shall suspend or terminate such regulation. On the same basis and in like manner the Secretary may terminate any such modification or suspension.

§ 917.43 Special purpose shipments.

(a) Except as otherwise provided in this section, any person may, without regard to the provisions of §§ 917.37, 917.41, 917.42, and 917.44, and the regulations issued thereunder, handle fruit (1) for consumption by charitable institutions; (2) for distribution by relief agencies; or (3) for commercial processing into products.

(b) Upon the basis of recommendations and information submitted by the commodity committee, or from other available information, the Secretary may relieve from any or all requirements, under or established pursuant to §§ 917.41, 917.42, 917.45, or 917.37, the handling of fruit: (1) To designated market areas outside the continental United States; (2) for such specified purposes (including shipments to facilitate the conduct of marketing research and development projects established pursuant to § 917.39); or (3) in such minimum quantities or types of shipments, as may be prescribed.

(c) The commodity committee shall, with the approval of the Secretary, prescribe such rules, regulations, and safeguards as it may deem necessary to prevent fruit handled under the provisions of this section from entering the channels of trade for other than the specified purposes authorized by this section. Such rules, regulations, and safeguards may include the requirements that handlers shall file applications and receive approval from the commodity committee for authorization to handle fruit pursuant to this section, and that such applications be accompanied by a certification by the intended purchaser or receiver that the fruit will not be used for any purpose not authorized by this section.

§ 917.44 Exemptions.

(a) Each commodity committee established pursuant to this part for a particular fruit, shall, subject to the approval of the Secretary, adopt the procedural rules to govern the issuance of exemption certificates.

(b) In the event the Secretary issues a regulation for a particular fruit pursuant to the provisions of §§ 917.40 and 917.41, the commodity committee, or its agents, established pursuant to this part for such fruit shall determine what the percentage of such fruit permitted to be shipped from each district is of the total quantity of such fruit which would be shipped from such district in the absence of such regulation. An exemption certificate shall thereafter be issued by such committee to any grower who furnishes proof, satisfactory to such committee, that by reason of conditions beyond his control he will be prevented, because of the regulation issued, from shipping, or having shipped, a percentage of his crop of such fruit equal to the percentage, determined as aforesaid, of all such fruit permitted to be shipped from his district. The certificate shall permit such grower to ship, or have shipped, a percentage of his crop of such fruit equal to the percentage determined as aforesaid. Each such commodity committee shall maintain a record of all applications submitted for exemption certificates pursuant to the provisions of this section, and shall maintain a record of all certificates issued, including the information used in determining in each instance the quantity of fruit thus to be exempted, and a record of all shipments of exempted fruit. Such additional information as the Secretary may require shall be recorded in the records of such committee. Each commodity committee shall, from time to time, submit to the Secretary reports stating in detail the number of exemption certificates issued, the quantity of fruit thus exempted, and such additional information as may be requested by the Secretary.

(c) In the event the commodity committee, established pursuant to this part for a particular fruit, determines that by reason of general crop failure or any other unusual conditions within a particular district or districts, it is not feasible or would not be equitable to issue exemption certificates to growers within such district or districts on the basis set forth in paragraph (b) of this section, it may issue exemption certificates on the basis of the average of the percentages, as determined under paragraph (b) of this section, of the crops of such fruit permitted to be shipped from all districts. An exemption certificate shall thereafter be issued by such committee to any grower who furnishes proof satisfactory to such committee to the effect that such grower will be prevented, because of the aforesaid regulation, from shipping, or having shipped, as large a percentage of his crop of such fruit as the average of the percentages, as determined under paragraph (b) of this section, of the crops of such fruit permitted to be shipped from all districts. The certificate shall permit such grower to ship, or have shipped, a percentage of his crop of such fruit equal to the average of the percentages determined as aforesaid.

(d) If any grower is dissatisfied with the action of a commodity committee taken with respect to his application for an exemption certificate, such grower may appeal to the Secretary: *Provided*, That such appeal shall be made promptly. The Secretary may, upon an appeal made as aforesaid, modify or reverse the action of the committee from which such appeal was taken. The authority of the Secretary to supervise and control the issuance of exemption certificates is unlimited and plenary; and any determination by the Secretary with respect to an exemption certificate shall be final and conclusive.

§ 917.45 Inspection and certification.

(a) Whenever the handling of any variety of a particular fruit is regulated pursuant to §§ 917.41 or 917.42, each handler who handles such fruit shall, prior thereto, cause such fruit to be inspected by the Federal or Federal-State Inspection Service: *Provided*, That inspection and certification shall not be required if such fruit has previously been so inspected and certified. Promptly after inspection and certification, each such handler shall submit, or cause to be submitted, to the commodity committee a copy of the certificate of inspection issued with respect to such fruit. The commodity committees may, with the approval of the Secretary, prescribe rules and regulations waiving the inspection requirements of this section where it is determined that inspection is not available: *Provided*, That all shipments made under such waiver shall comply with all regulations in effect.

(b) The Control Committee may enter into an agreement with the Federal and Federal-State Inspection Services with respect to the costs of the inspection required by paragraph (a) of this section, for any or all fruits, and may collect from handlers their respective pro rata shares of such costs.

REPORTS

§ 917.50 Reports.

(a) Each handler shall furnish to the Manager of the Control Committee, at such times and for such periods as the Control Committee or the Commodity Committees may designate, certified reports covering, to the extent necessary for the committees to perform their functions, each shipment of fruits as follows:

(1) The name of the shipper and the shipping point;

(2) The car or truck license number (or name of the trucker), and identification of the carrier;

(3) The date and time of departure;

(4) The number and type of containers in the shipment;

(5) The quantities shipped, showing separately the variety, grade, and size of the fruit;

(6) The destination;

(7) Identification of the inspection certificate or waiver pursuant to which the fruit was handled;

(8) The price per package at which sold, including specific and detailed information relative to all discounts, allowances, rebates, or other adjustments thereof.

(b) Upon request of any committee, made with the approval of the Secretary, each handler shall furnish to the Manager of the Control Committee, in such manner and at such times as it may prescribe, such other information as may be necessary to enable the committee to perform its duties under this part.

(c) Each handler shall maintain for at least two succeeding fiscal years, such records of the fruits received and disposed of by him as may be necessary to verify the reports he submits to the committee pursuant to this section.

(d) All reports and records submitted by handlers pursuant to the provisions of this section shall be received by, and at all times be in custody of, one or more designated employees of the Control Committee. No such employee shall disclose to any person, other than the Secretary upon request therefor, data or information obtained or extracted from such reports and records which might affect the trade position, financial condition, or business operation of the particular handler from whom received: *Provided*, That such data and information may be combined, and made available to any person, in the form of general reports in which the identities of the individual handlers furnishing the information are not disclosed and may be revealed to any extent necessary to effect compliance with the provisions of this part and the regulations issued thereunder.

MISCELLANEOUS PROVISIONS

§ 917.60 Effective time.

The provisions of this part and of any amendment thereto, shall become effective at such time as the Secretary may declare above his signature and shall continue in force until terminated in one of the ways specified in § 917.61.

§ 917.61 Termination.

(a) The Secretary may at any time terminate the provisions of this part by giving at least one day's notice by means of a press release or in any other manner in which he may determine.

(b) The Secretary shall terminate or suspend the operation of any and all of the provisions of this part whenever he finds that such provisions do not tend to effectuate the declared policy of the act.

(c) The Secretary shall terminate the provisions of this part or the applicability of the provisions of this part as to a particular fruit whenever he finds by referendum or otherwise that such termination is favored by a majority of the growers of the fruit: *Provided*, That such majority has during the current fiscal period produced more than 50 percent of the volume of the fruit which was produced within the production area for shipment in fresh form. Such termination shall become effective on the first day of March subsequent to the announcement thereof by the Secretary.

(d) The Control Committee shall consider all petitions from growers submitted to it for termination of this part provided such petitions are received by the Control Committee prior to October 1 of the then current fiscal period. Upon recommendation of the Control Committee, received not later than December 1 of the then current fiscal period, the Secretary shall conduct a referendum among the growers of the particular kind of fruit prior to February 15 of such fiscal period to ascertain whether continuance of this part is favored by producers.

(e) The Secretary shall conduct a referendum within the period beginning December 1, 1968, and ending February 15, 1969, to ascertain whether continuance of this part as to any fruit included in this part is favored by the growers. The Secretary shall conduct such a referendum within the same period of every fourth fiscal period thereafter.

(f) The provisions of this part shall, in any event, terminate whenever the provisions of the act authorizing them cease to be in effect.

§ 917.62 Proceedings after termination.

(a) Upon the termination of the provisions of this part pertaining to any fruit or fruits, the Control Committee then functioning shall for the purpose of liquidating the affairs of the Control Committee with respect to such fruit continue as trustee of all the funds and property then in its possession, or under its control, including claims for any funds unpaid or property not delivered at the time of such termination.

(b) The said trustees shall (1) continue in such capacity until discharged by the Secretary; (2) from time to time account for all receipts and disbursements and deliver all property on hand, together with all books and records of the committee and of the trustees, to such persons as the Secretary may direct; and (3) upon the request of the Secretary, execute such assignments or other instruments necessary or appropriate to vest in such person, full title and right to all funds, property, and claims vested in the Control Committee or the trustees pursuant thereto.

(c) Any person to whom funds, property, or claims have been transferred or delivered, pursuant to this section, shall be subject to the same obligation imposed upon the Control Committee and upon the trustees.

§ 917.63 Effect of termination or amendment.

Unless otherwise expressly provided by the Secretary, the termination of this subpart or of any regulation issued pursuant to this subpart, or the issuance of any amendment to either thereof, shall not (a) affect or waive any right, duty, obligation, or liability which shall have arisen or which may thereafter arise in connection with any provision of this subpart or any regulation issued under this subpart, or (b) release or extinguish any violation of this subpart or of any regulation issued under this subpart, or (c) affect or impair any rights or remedies of the Secretary or of any other person with respect to any such violation.

§ 917.64 Compliance.

Each shipper shall comply with all regulations. No shipper shall ship fruit in violation of the provisions of this part or in violation of any regulation issued by the Secretary pursuant to the provisions of this part.

§ 917.65 Duration of immunities.

The benefits, privileges, and immunities conferred by virtue of the provisions of this subpart shall cease upon its termination except with respect to acts done under and during the time the provisions of this part are in force and effect.

§ 917.66 Agents.

The Secretary may by a designation in writing name any person, including any officer or employee of the Government or any agency or Division in the United States Department of Agriculture, to act as his agent or representative in connection with any of the provisions of this part.

§ 917.67 Derogation.

Nothing contained in this part is or shall be construed to be in derogation or in modification of the rights of the Secretary or of the United States to exercise any powers granted by the act or otherwise, and in accordance with such powers to act in the premises whenever such action is deemed advisable.

§ 917.68 Liability of committee members.

No member of the Control Committee, any commodity committee, or other committee, or any subcommittee, or any employee of the Control Committee shall be held personally responsible, either individually or jointly with others, in any way whatsoever, to any shipper or any other person for errors in judgment, mistakes, or other acts, either of commission or omission, as such member or employee, except for acts of dishonesty.

§ 917.69 Separability.

If any provision of this part is declared invalid or the applicability thereof to any person, circumstance, thing, or any particular kind of fruit is held invalid, the validity of the remainder of this part or the applicability thereof to any other person, circumstance, thing, or kind of fruit shall not be affected thereby.

Dated, December 20, 1965, to become effective upon publication in the FEDERAL REGISTER.

GEORGE L. MEHREN,
Assistant Secretary.

[F.R. Doc. 65-13709; Filed, Dec. 22, 1965; 8:47 a.m.]

Chapter X—Consumer and Marketing Service (Marketing Agreements and Orders; Milk), Department of Agriculture

[Milk Order 68]

PART 1068—MILK IN MINNEAPOLIS-ST. PAUL, MINN., MARKETING AREA

Order Amending Order

§ 1068.0 Findings and determinations.

The findings and determinations hereinafter set forth are supplementary and in addition to the findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto; and all of said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) *Findings upon the basis of the hearing record.* Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), a public hearing was held upon certain proposed amendments to the tentative marketing agreement and to the order regulating the handling of milk in the Minneapolis-St. Paul, Minn., marketing area. Upon the basis of the evidence introduced at such hearing and the record thereof, it is found that:

(1) The said order as hereby amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act;

(2) The parity prices of milk, as determined pursuant to section 2 of the Act, are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the said marketing area, and the minimum prices specified in the order as hereby amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest; and

(3) The said order as hereby amended, regulates the handling of milk in the same manner as, and is applicable only to persons in the respective classes of industrial or commercial activity specified in, a marketing agreement upon which a hearing has been held.

(b) *Additional findings.* It is necessary in the public interest to make this order amending the order effective January 1, 1966. Any delay beyond that date would tend to disrupt the orderly marketing of milk in the marketing area.

The provisions of the said order are known to handlers. The recommended decision of the Deputy Administrator, Regulatory Programs was issued November 26, 1965, and the decision of the Assistant Secretary containing all amendment provisions of this order, was issued December 10, 1965. The changes effected by this order will not require extensive preparation or substantial alteration in method of operation for handlers. In view of the foregoing, it is hereby found and determined that good cause exists for making this order amending the order effective January 1, 1966, and that it would be contrary to the public interest to delay the effective date of this order for 30 days after its publication in the FEDERAL REGISTER. (Sec. 4(c), Administrative Procedure Act, 5 U.S.C. 1001–1011.)

(c) *Determinations.* It is hereby determined that:

(1) The refusal or failure of handlers (excluding cooperative associations specified in section 8c(9) of the Act) of more than 50 percent of the milk, which is marketed within the marketing area, to sign a proposed marketing agreement, tends to prevent the effectuation of the declared policy of the Act;

(2) The issuance of this order, amending the order, is the only practical means pursuant to the declared policy of the Act of advancing the interests of producers as defined in the order as herein amended; and

(3) The issuance of the order amending the order is approved or favored by at least two-thirds of the producers who during the determined representative period were engaged in the production of milk for sale in the marketing area.

Order relative to handling. It is therefore ordered, that on and after the effective date hereof, the handling of milk in the Minneapolis-St. Paul, Minn., marketing area shall be in conformity to and in compliance with the terms and conditions of the aforesaid order, as amended and as hereby amended, as follows:

1. In § 1068.52 paragraph (b) is revised to read as follows:

§ 1068.52 **Supply and demand ratio.**

* * * * *

(b) Determine the total pounds of milk and milk products disposed of from pool plants as Class I (excluding shrinkage and unaccounted for milk) during the same 2 months; and

* * * * *

2. Section 1068.53 is revised to read as follows:

§ 1068.53 **Class I price.**

Subject to the differentials provided in in §§ 1068.55 and 1068.56(a), the price per hundredweight for Class I milk each month shall be the basic formula price for the preceding month computed pursuant to § 1068.51 plus an amount as follows: $1.00 for July, August, September, October, and November; $0.76 for other months: *Provided,* That prior to July 1, 1966, $0.86 shall be added to the basic formula price in lieu of the above amounts: *And provided further,* That whenever the current supply-demand ratio varies from that set forth in the table below, the Class I price shall be increased or decreased 1.5 cents for each full percentage point that the current supply-demand ratio is above or below that set forth in the table, but such price shall not be increased or decreased more than 24 cents for any month because of the current supply-demand ratio:

Months to which applicable	Standard percentages	Months used in computing current supply-demand ratio
January	77	October-November.
February	72	November-December.
March	68	December-January.
April	68	January-February.
May	67	February-March.
June	66	March-April.
July	60	April-May.
August	57	May-June.
September	57	June-July.
October	66	July-August.
November	75	August-September.
December	77	September-October.

(Secs. 1–19, 48 Stat. 31, as amended; 7 U.S.C. 601–674)

Effective date. January 1, 1966.

Signed at Washington, D.C., on December 20, 1965.

GEORGE L. MEHREN,
Assistant Secretary.

[F.R. Doc. 65-13710; Filed, Dec. 22, 1965; 8:47 a.m.]

[Milk Order 1108]

PART 1108—MILK IN CENTRAL ARKANSAS MARKETING AREA

Order Amending Order

§ 1108.0 **Findings and determinations.**

The findings and determinations hereinafter set forth are supplementary and in addition to the findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto; and all of the said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) *Findings upon the basis of the hearing record.* Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), a public hearing was held upon certain proposed amendments to the tentative marketing agreement and to the order regulating the handling of milk in the Central Arkansas marketing area. Upon the basis of the evidence introduced at such hearing and the record thereof, it is found that:

(1) The said order as hereby amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act;

(2) The parity prices of milk, as determined pursuant to section 2 of the Act, are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the said marketing area, and the minimum prices specified in the order as hereby amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest; and

(3) The said order as hereby amended, regulates the handling of milk in the same manner as, and is applicable only to persons in the respective classes of industrial or commercial activity specified in, a marketing agreement upon which a hearing has been held.

(b) *Additional findings.* It is necessary in the public interest to make this order amending the order effective not later than December 17, 1965. Any delay beyond that date would tend to disrupt the orderly marketing of milk in the marketing area.

The provisions of the said order are known to handlers. The recommended decision of the Deputy Administrator, Regulatory Programs, was issued November 23, 1965, and the decision of the Acting Secretary containing all amendment provisions of this order was issued December 16, 1965. The changes effected by this order will not require extensive preparation or substantial alteration in method of operation for handlers. In view of the foregoing, it is hereby found and determined that good cause exists for making this order amending the order effective December 17, 1965, and that it would be contrary to the public interest to delay the effective date of this amendment for 30 days after its publication in the FEDERAL REGISTER. (Sec. 4(c), Administrative Procedure Act, 5 U.S.C. 1001–1011)

(c) *Determinations.* It is hereby determined that:

(1) The refusal or failure of handlers (excluding cooperative associations specified in section 8c(9) of the Act) of more than 50 percent of the milk, which is marketed within the marketing area, to sign a proposed marketing agreement, tends to prevent the effectuation of the declared policy of the Act;

(2) The issuance of this order, amending the order, is the only practical means pursuant to the declared policy of the Act of advancing the interests of producers as defined in the order as hereby amended; and

(3) The issuance of the order amending the order is approved or favored by at least two-thirds of the producers who during the determined representative period were engaged in the production of milk for sale in the marketing area.

Order relative to handling. It is therefore ordered, that on and after the effective date hereof, the handling of milk in the Central Arkansas marketing area shall be in conformity to and in compliance with the terms and conditions of the aforesaid order as amended, and as hereby further amended, as follows:

In § 1108.51(a), the introductory text of subparagraph (3) is revised to read as follows:

§ 1108.51 **Class prices.**

* * * * *

(a) *Class I milk price.* * * *

(3) For a "minus deviation percentage" the Class I price shall be increased

and for a "plus deviation percentage" the Class I price shall be decreased as follows: *Provided*, That such adjustments shall be plus 25 cents each month from the effective date of this order through June 30, 1966.

* * * * *

(Secs. 1-19, 48 Stat. 31, as amended; 7 U.S.C. 601-674)

Effective date. December 17, 1965.

Signed at Washington, D.C., on December 17, 1965.

JOHN A. SCHNITTKER,
Under Secretary.

[F.R. Doc. 65-13685; Filed, Dec. 22, 1965; 8:45 a.m.]

Title 9—ANIMALS AND ANIMAL PRODUCTS

Chapter I—Agricultural Research Service, Department of Agriculture

SUBCHAPTER C—INTERSTATE TRANSPORTATION OF ANIMALS AND POULTRY

PART 74—SCABIES IN SHEEP

Interstate Movement

Pursuant to the provisions of sections 4 through 7 of the Act of May 29, 1884, as amended, sections 1 and 2 of the Act of February 2, 1903, as amended, and sections 1 through 4 of the Act of March 3, 1905, as amended (21 U.S.C. 111-113, 115, 117, 120, 121, 123-126), §§ 74.2 and 74.3 of Part 74, Subchapter C, Chapter I, Title 9, Code of Federal Regulations, as amended (30 F.R. 8566, 11944), are hereby further amended in the following respects:

1. Subparagraph (1) of § 74.2(a) is revised and (a)(2) deleted.

§ 74.2 Designation of free and infected areas.

(a) * * *

(1) Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusets, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Virgin Islands of the United States, Washington, West Virginia, Wisconsin, and Wyoming.

(2) [Deleted]

* * * * *

§ 74.3 [Amended]

2. Subparagraph (2) of § 74.3(a) is hereby deleted.

(Secs. 4-7, 23 Stat. 32, as amended, secs. 1, 2, 32 Stat. 791-792, as amended, secs. 1-4, 33 Stat. 1264, as amended, 1265, as amended; 21 U.S.C. 111-113, 115, 117, 120, 121, 123-126; 29 F.R. 16210, as amended, 30 F.R. 5801)

Effective date. The foregoing amendment shall become effective upon issuance.

The amendment adds the County of Uvalde in Texas to the list of three areas and deletes such county from the list of infected and eradication areas as sheep scabies is no longer known to exist therein. The entire State of Texas is now designated as a free area. Hereafter, the restrictions pertaining to the interstate movement of sheep from or into infected and eradication areas, as contained in 9 CFR Part 74, as amended, will not apply to Texas. However, the restrictions in said Part 74 pertaining to the interstate movement of sheep from or into free areas will apply to such State.

The amendment relieves certain restrictions presently imposed and must be made effective immediately to be of maximum benefit to persons subject to the restrictions which are relieved. Accordingly, under section 4 of the Administrative Procedure Act (5 U.S.C. 1003, it is found upon good cause that notice and other public procedure with respect to the amendment are impracticable and contrary to the public interest, and good cause is found for making the amendment effective less than 30 days after publication in the FEDERAL REGISTER.

Done at Washington, D.C., this 17th day of December 1965.

R. J. ANDERSON,
Acting Administrator,
Agricultural Research Service.

[F.R. Doc. 65-13707; Filed, Dec. 22, 1965; 8:46 a.m.]

Title 12—BANKS AND BANKING

Chapter V—Federal Home Loan Bank Board

SUBCHAPTER C—FEDERAL SAVINGS AND LOAN SYSTEM

[No. 19,596]

PART 545—OPERATIONS

Mobile Facilities

DECEMBER 17, 1965.

Resolved that, notice and public procedure having been duly afforded (30 F.R. 894) and all relevant material presented or available having been considered by it, the Federal Home Loan Bank Board, upon the basis of such consideration and of determination by it of the advisability of amendment of Part 545 of the rules and regulations for the Federal Savings and Loan System (12 CFR Part 545) by the addition of a new section as hereinafter set forth, and for the purpose of effecting such amendment, hereby amends Part 545 of the rules and regulations for the Federal Savings and Loan System to read as follows, effective January 23, 1966:

Amend Part 545 by adding, immediately after § 545.14-3, a new section, § 545.14-4, as follows:

§ 545.14-4 Mobile facility.

(a) *General provisions.* In order to provide savings and loan services in areas which are not otherwise provided with such services locally, a Federal association may establish and operate a mobile facility at 2 or more locations, each of which shall be more than 10 miles from the location of any home or branch office or agency of any other savings and loan association insured by the Federal Savings and Loan Insurance Corporation, subject to the following requirements and limitations:

(1) Prior to the establishment and operation of any such facility, the association shall obtain approval by the Board of an application by the association for permission to do so;

(2) Such facility shall be operated only at locations approved by the Board, each of which shall at all times be appropriately identified at the site, and shall be within the State in which the association's home office is located and within the association's regular lending area;

(3) Such facility shall be open for business at the same location on the same day or days (not to exceed 2 days) of each week, during such hours, aggregating a total of not less than 4 hours a day, as the association's board of directors may from time to time determine;

(4) Any business of the association, as authorized by its board of directors, may be transacted at such facility, except that loans, other than loans to borrowers on the security of their savings accounts in the association, shall not be approved at any such facility, and a detailed record of the transactions of each such facility shall be maintained as provided by § 545.20;

(5) The mobile equipment used in the establishment and operation of such facility shall not remain at any location while such facility is not open for business, except that such equipment may remain overnight at any location at which such facility is open for business on 2 successive days; and

(6) Without prior approval by the Board, operation of such facility shall not be continued at any location after the expiration of such period of time as the Board may prescribe with respect to operation of the facility at such location.

(b) *Application for permission to establish and operate a mobile facility.* Each application to the Board by a Federal association for permission to establish and operate a mobile facility shall:

(1) State each location at which it is proposed to operate such facility;

(2) Show that there is a need for such facility at each such location and that it is not feasible to establish a full-time office at any such location;

(3) State the functions to be performed at each location and the personnel to be provided;

(4) Include an estimate of the annual volume of business to be transacted at each location, and an estimate of the aggregate amount of annual income and expense of such facility;

(5) Describe fully the equipment to be provided for the operation of such facility and the procedures for incorporating the business transacted by such facility at each location into the complete record of all business transacted by the association; and

(6) Be supported by a map on which the applicant association's regular lending area is delineated and which identifies (i) each location at which it is proposed to establish and operate such facility; (ii) the location of such association's home office and each of its branch offices; (iii) the location of any competitive savings and loan and bank offices; and (iv) the distance between each proposed location of such facility and the location of each of the foregoing offices.

(Sec. 5, 48 Stat. 132, as amended; 12 U.S.C. 1464. Reorg. Plan No. 3 of 1947, 12 F.R. 4981, 3 CFR, 1947 Supp.)

By the Federal Home Loan Bank Board.

[SEAL] HARRY W. CAULSEN, *Secretary.*

[F.R. Doc. 65-13771; Filed, Dec. 22, 1965; 8:48 a.m.]

SUBCHAPTER D—FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION

[No. FSLIC-2,364]

PART 561—DEFINITIONS

Slow Loans

DECEMBER 17, 1965.

Resolved that the Federal Home Loan Bank Board, upon the basis of consideration by it of the advisability of amendment of § 561.16 of the rules and regulations for Insurance of Accounts (12 CFR 561.16) as hereinafter set forth, to eliminate from the definition of slow loans certain loans which are modified while delinquent solely for the purpose of advancing funds to protect an institution's lien or to pay for hazard insurance covering the security property when the funds impounded for such purpose are insufficient, and for the purpose of effecting such amendment hereby amends said § 561.16, as follows, effective December 23, 1965:

Paragraph (e) of § 561.16 of the rules and regulations for Insurance of Accounts is hereby amended to read as follows:

§ 561.16 Slow loans.

* * * * *

(e) Any loan or land contract that has been modified or refinanced within the preceding 12 months while contractually delinquent, except a mortgage loan or land contract (1) more than 2 years old and less than 30 days (1 month) contractually delinquent at the time of the modification or refinancing and not previously modified or refinanced subsequent to January 1, 1964, or (2) contractually delinquent for less than 30 days (1 month) and modified or refinanced while so contractually delinquent solely by reason of advances made for the purpose of payment of real estate taxes, other governmental assessments, hazard insurance premiums, or water or sewer rents or like charges, required because of deficiencies in amounts prepaid under the terms of such loan or contract caused by revisions of such taxes, assessments, premiums, rents or charges.

* * * * *

(Secs. 402, 403, 48 Stat. 1256, 1257, as amended; 12 U.S.C. 1725, 1726. Reorg. Plan No. 3 of 1947, 12 F.R. 4981, 3 CFR 1947 Supp.)

Resolved further that, inasmuch as it is necessary for the foregoing amendment to be effective before December 31, 1965, in order that the report of slow loans on institutions' semiannual reports will be computed without reference to the modifications sought to be eliminated hereby, the Board hereby finds that notice and public procedure on the said amendment are impracticable under the provisions of § 508.12 of the general regulations of the Federal Home Loan Bank Board (12 CFR 508.12) and section 4(a) of the Administrative Procedure Act.

Resolved further that, inasmuch as the foregoing amendment relieves restriction, the Board hereby finds that postponement of the effective date under the provisions of § 508.14 of the general regulations of the Federal Home Loan Bank Board and section 4(c) of the Administrative Procedure Act is not required and the Board hereby provides that the above said amendment shall become effective as hereinbefore set forth.

By the Federal Home Loan Bank Board.

[SEAL] HARRY W. CAULSEN, *Secretary.*

[F.R. Doc. 65-13772; Filed, Dec. 22, 1965; 8:48 a.m.]

[No. FSLIC-2,363]

PART 563—OPERATIONS

Examinations, Audits and Appraisals

DECEMBER 17, 1965.

Resolved that, notice and public procedure having been duly afforded (30 F.R. 11975) and all relevant material presented or available having been considered by it, the Federal Home Loan Bank Board, upon the basis of such consideration and of determination by it of the advisability of amendment of § 563.17-1 of the rules and regulations for Insurance of Accounts (12 CFR 563.17-1) as hereinafter set forth, and for the purpose of effecting such amendment, hereby amends said § 563.17-1 as follows, effective April 1, 1966:

Paragraphs (a) and (b) of § 563.17-1 are hereby revised to read as follows:

§ 563.17-1 Examinations and audits; appraisals; establishment and maintenance of records.

(a) *Examinations and audits.* (1) Each insured institution shall be examined periodically, and may be examined at any time, by the Corporation, with appraisals when deemed advisable, in accordance with general policies from time to time established by the Board. The cost, as computed by the Corporation, of any examination made by it, including office analysis thereof, overhead, per diem, travel expense, and other supervision by the Board, shall be paid by the institution examined.

(2) Each insured institution shall be audited at least once in each calendar year by auditors and in a manner satisfactory to the Corporation in accordance with general policies from time to time established by the Board. The Corporation may at any time make, or cause to be made, an audit of an insured institution with appraisals when deemed advisable. An insured institution shall promptly file with the Corporation, through the Board's Chief Examiner of the Federal Home Loan Bank District in which the home office of such institution is located, a copy of the report of each audit, other than audits made by the Corporation, made pursuant to this subparagraph (2). The cost of any audit made pursuant to this subparagraph (2) shall be paid by the insured institution audited.

(b) *Appraisals.* (1) Unless otherwise ordered by the Board, appraisal of real estate by the Corporation in connection with any examination or audit of an insured institution shall be made by an appraiser, or by appraisers, selected by the Board's Chief Examiner of the Federal Home Loan Bank District in which such institution is located. The cost of such appraisal shall promptly be paid by such insured institution direct to such appraiser or appraisers upon receipt by the institution of a statement of such cost as approved by such Chief Examiner. A copy of the report of each appraisal made by the Corporation pursuant to any of the foregoing provisions of this section shall be furnished to the insured institution within a reasonable time, not to exceed 90 days, following the completion of such appraisals and the filing of a report thereof by the appraiser, or appraisers, with such Chief Examiner.

(2) The Corporation may obtain at any time, at its expense, such appraisals of any of the assets, including the security therefor, of an insured institution as the Corporation deems appropriate.

* * * * *

(Secs. 402, 403, 48 Stat. 1256, 1257, as amended; 12 U.S.C. 1725, 1726. Reorg. Plan No. 3 of 1947, 12 F.R. 4981, 3 CFR, 1947 Supp.)

By the Federal Home Loan Bank Board.

[SEAL] HARRY W. CAULSEN, *Secretary.*

[F.R. Doc. 65-13773; Filed, Dec. 22, 1965; 8:48 a.m.]

Title 15—COMMERCE AND FOREIGN TRADE

Chapter II—National Bureau of Standards, Department of Commerce

SUBCHAPTER B—STANDARD REFERENCE MATERIALS

PART 230—STANDARD REFERENCE MATERIALS

Subpart C—Standards of Certified Chemical Composition

Subpart D—Standards of Certified Properties and Purity

MISCELLANEOUS AMENDMENTS

Under the provisions of 15 U.S.C. 275a and 277, the following amendments relating to standard reference materials issued by the National Bureau of Standards are effective upon publication in the FEDERAL REGISTER. The amendments renew certain standard reference materials.

The following amends Title 15 CFR Part 230:

1. Section 230.7–3 Cast iron (chip form) is amended to revise standard 82a to read as follows:

Sample No.	Kind	Price
82b	Nickel-chromium cast iron	$15.00

2. Section 230.8–6 Standard rubbers and rubber compounding materials is amended to revise standard 386e as follows:

Sample No.	Kind	Price
386f	Styrene-butadiene, type 1500	$45.00

(Sec. 9, 31 Stat. 1450, as amended; 15 U.S.C. 277; interprets or applies sec. 7, 70 Stat. 959; 15 U.S.C. 275a)

A. V. ASTIN,
Director.

[F.R. Doc. 65–13675; Filed, Dec. 22, 1965; 8:45 a.m.]

Title 16—COMMERCIAL PRACTICES

Chapter I—Federal Trade Commission

PART 15—ADMINISTRATIVE OPINIONS AND RULINGS

Change of Section Headings

The heading of § 15.9 entitled "Foreign origin disclosure" is changed to:

§ 15.9 Labeling of containers for imported knives.

The heading of § 15.11 entitled "Foreign origin disclosure" is changed to:

§ 15.11 Labeling of truss plates manufactured from imported steel.

Issued: December 22, 1965.

By direction of the Commission.

[SEAL] JOSEPH W. SHEA,
Secretary.

[F.R. Doc. 65–13691; Filed, Dec. 22, 1965; 8:46 a.m.]

Title 32—NATIONAL DEFENSE

Chapter VII—Department of the Air Force

SUBCHAPTER K—MILITARY TRAINING AND SCHOOLS

PART 901—APPOINTMENT TO THE USAF ACADEMY

Miscellaneous Amendments

Part 901 is set forth, in part, to show those changes made by the current directive, as follows:

1. The source citation in Part 901 is amended to read as follows:

SOURCE: AFR 53–10, November 1, 1965.

2. In § 901.6, paragraphs (a), (b), (c), (e)(1) and the introductory portion of paragraph (f) are revised to read as follows:

§ 901.6 Nomination requirements and procedures.

* * * * *

(a) *Congressional, District of Columbia, and U.S. Possessions.* A U.S. citizen domiciled in 1 of the 50 States may apply directly to the U.S. Senators of his State and the Representative of his Congressional District. Persons domiciled in the District of Columbia apply to the District Commissioners. Persons domiciled in Puerto Rico apply to the Resident Commissioner. Such persons who are natives of Puerto Rico also may apply to the Governor. Sons of civilians residing in the Panama Canal Zone, or sons of civilian employees of the U.S. Government and the Panama Canal Company residing in the Republic of Panama, apply to the Governor of the Panama Canal Zone. Residents of American Samoa, Guam, and the Virgin Islands apply to their respective Governors. Congressional nominations are submitted by the nominating authorities between June 1st and January 31st for the class entering the following June. Send applications to the nominating authority before or early in the nominating period. See § 901.9(a) for sample letter format. Address all inquiries concerning status of applications to the nominating authority.

(b) *Presidential (competitive).* The son of a member of a Regular component of the Armed Forces of the United States is eligible for nomination. The Regular component member must be on active duty, retired or deceased, but not discharged before retirement or death. An adopted son is eligible if adoption proceedings were initiated before his 15th birthday. An eligible individual may apply to the Director of Admissions, USAF Academy, Colo., 80840, requesting nomination in accordance with § 901.9 (b). The nominating period opens on June 1 and closes on November 30th.

(c) *Vice Presidential.* Any individual who meets the basic eligibility requirements may apply for nomination to the Vice President, U.S. Senate, Washington, D.C., 20510. The Vice President may submit nominations to the Academy between June 1 and January 31, for the class entering the following June. It is important to submit a request for nomination before or early in the nominating period. See § 901.9(c) for sample letter format. Address all inquiries concerning status of application to the nominating authority.

* * * * *

(e) *Honor military and honor naval schools and Air Force Reserve Officer Training Corps (competitive)*—(1) *Honor military and honor naval schools.* Three honor graduates or prospective honor graduates from each designated honor military and honor naval school may be nominated to fill the vacancies allocated to such schools. Vacancies are filled in the order of merit, regardless of the schools from which the nominations are made. Appropriate school authorities must certify that each nominee is an honor graduate and meets the basic eligibility requirements listed in § 901.5. Use forms provided by the Academy to submit nominations to the Director of Admissions, USAF Academy, Colo., 80840. Make nominations between June 1 and January 31, for the class entering the following June. Nominations are not limited to honor graduates of the current year. An individual eligible for nomination in this category will apply to the administrative authority of his school.

* * * * *

(f) *Sons of Congressional Medal of Honor winners.* The son of any Congressional Medal of Honor winner who served in any branch of the Armed Forces may apply for nomination. If an applicant meets the eligibility criteria and qualifies on the entrance examinations, he will be admitted to the Academy. An applicant must write to the Director of Admissions, USAF Academy, Colo., 80840, requesting a nomination in this category. The nominating period opens on June 1 and closes on January 31. The letter must include:

* * * * *

3. Section 901.7 is revised to read as follows:

§ 901.7 Where applicant will report.

(a) An applicant nominated in one or more of the categories in § 901.6 (except § 901.6(g)) will be notified by the Director of Admissions, USAF Academy, to report to an Air Force Academy and Aircrew Examining Center for qualification testing. These centers are listed in AFR 23–11 (Air Force Academy and Aircrew

Examining Centers) and the current Air Force Academy catalog. The nominee also will be instructed concerning the College Entrance Examination Board tests. All requirements are listed in the letter of instructions and the Instructions to Candidates Booklet. No nominee will be considered for appointment until scores on all tests are received.

(b) A Congressional applicant (see § 901.6(a)) may be authorized by the nominating authority to undergo a medical examination at any designated Air Force, Army, or Navy medical examining facility. These facilities are listed in AFR 23-11 and the current Air Force Academy catalog (Air Force only) and on AF Form 1197 (Air Force, Army, and Navy). AF Form 1197, "Authorization For Medical Examination For The United States Air Force Academy," may be provided applicants only by Members of Congress.

Effective date. This amendment is effective upon publication in the FEDERAL REGISTER.

(Sec. 8012, 70A Stat. 488; 10 U.S.C. 8012)

By order of the Secretary of the Air Force.

FREDERICK A. RYKER,
Lt. Col., U.S. Air Force, Chief, Special Activities Group, Office of The Judge Advocate General.

[F.R. Doc. 65-13676, Filed, Dec. 22, 1965; 8:45 a.m.]

SUBCHAPTER W—AIR FORCE PROCUREMENT INSTRUCTION

MISCELLANEOUS AMENDMENTS TO SUBCHAPTER

PART 1001—GENERAL PROVISIONS

Subpart A—Introduction

§ 1001.305-4 [Amended]

1. At the very end of § 1001.305-4, the reference in parentheses is deleted.

§ 1001.305-52 [Amended]

2. In § 1001.305-52(c)(1), subdivision (i) is deleted.

Subpart D—Procurement Responsibility and Authority

1. In § 1001.451(c), the third reference has been deleted. The last sentence of paragraph (c) now reads as follows:

§ 1001.451 Representatives of contracting officers.

* * * * *

(c) * * * The functions assigned will not violate policies (e.g., base procurement centralization policy prescribed in §§ 1001.402 and 1001.452) which reserve certain actions or authorities to contracting officers or which require approval prior to placing the authority or procedure in effect.

* * * * *

2. In § 1001.453(j), subparagraph (2) is set forth for minor editorial changes, and in paragraph (m)(7), the second reference is amended. These portions now read as follows:

§ 1001.453 Delegations of authority.

* * * * *

(j) * * *

(2) Purchases involving more than $2,500 made by persons to whom requisite authority has not been delegated may be ratified only by the Director of Procurement and Production, Hq AFLC, or the Deputy Chief of Staff, Procurement and Production, Hq AFSC. Commanders will cause to be prepared the material and information required by subparagraph (1) of this paragraph and forwarded to AFLC (MCPKA), and/or AFSC (SCKP), as appropriate. All such transactions must be reviewed by the Staff Judge Advocate, Hq AFLC or Hq AFSC, as appropriate. The Director of Procurement and Production, Hq AFLC, and the Director of Procurement, Hq AFSC, will inform the Director of Procurement Policy, Hq USAF, of each transaction submitted for review under this subparagraph indicating whether or not the transaction was ratified.

* * * * *

(m) * * *

(7) Blanket Purchase Agreements as set forth in § 3.605 of this title and § 1003.605-3 of this subchapter.

* * * * *

§ 1001.457 [Amended]

3. In § 1001.457(a), the reference "§ 1001.459" is deleted.

4. In § 1001.458(b), the reference has been deleted in the introduction. Paragraph (b) now reads as follows:

§ 1001.458 Manual approval of contracts for services of experts and consultants.

* * * * *

(b) Contracts described in this section may be approved by the following persons pursuant to designations by the Commander, AMC:

* * * * *

§ 1001.465 [Amended]

5. In § 1001.465(a), the parenthetical phrase is amended to read: "(except as provided in § 18.108-1(c) and (d) of this title)."

Subpart E—Contingent or Other Fees

§ 1001.508-1 [Amended]

In § 1001.508-1, the reference "§ 1.507-1" in the introduction is amended to read: "§ 1.507-2."

Subpart F—Debarred, Ineligible and Suspended Bidders

§ 1001.605-4 [Amended]

1. In § 1001.605-4, the reference has been amended to read: "§ 1.605-3."

§ 1001.610 [Amended]

2. In § 1001.610(a)(3), the reference is amended to read "§ 1.609-3."

PART 1002—PROCUREMENT BY FORMAL ADVERTISING

Subpart B—Solicitation of Bids

In § 1002.201(a)(17), subdivision (ix) is deleted and reserved; in subdivision (xi), the title of the AFR has been amended, and in subdivision (xiii), the reference has been deleted; in paragraph (b)(2), subdivisions (vi) and (viii) are reserved. These portions are set forth as follows:

§ 1002.201 Preparation of invitations for bids.

* * * * *

(a) * * *
(17) * * *
(ix) [Reserved]

* * * * *

(xi) *Classified information.* Classified information in invitations for bids will be handled according to AFR 205-4 (Industrial Security).

* * * * *

(xiii) *Percentage of subcontracting.* When a Facility Capability Report is contemplated the IFB will contain the following provision:

* * * * *

(b) * * *
(21) * * *
(vii) [Reserved]
(viii) [Reserved]

* * * * *

PART 1003—PROCUREMENT BY NEGOTIATION

Subpart B—Circumstances Permitting Negotiation

1. In § 1003.208-2(a), the AFRs have been superseded. This paragraph now reads as follows:

§ 1003.208-2 Application.

(a) In addition to meeting the requirements set forth in § 3.208-2 of this title, the proposed procurement must concern supplies which are authorized for base procurement by AFM 145-1 (Commissary and Subsistence Depot Operating Manual), or brand-name items selected by the Superintendent of the USAF Academy for resale in the Cadet Store.

* * * * *

§ 1003.214-50 [Amended]

2. In § 1003.214-50(a), paragraphs (a) and (b) following "2." in the format are deleted.

§ 1003.217-2 [Amended]

3. In § 1003.217-2(d), the reference is amended to read "§ 5.504-1."

Subpart D—Types of Contracts

In § 1003.408, the introductory portion of paragraph (b) is deleted and subparagraph (1) is deleted and reserved; and in paragraph (c)(3), subdivision (x)(*e*) is deleted and reserved, as follows:

§ 1003.408 Letter contract.

* * * * *

(b) *Content.* (1) [Reserved]

* * * * *

(c) * * *
(3) * * *
(x) * * *
(*e*) [Reserved]

* * * * *

Subpart E—Solicitations of Proposals and Quotations

§ 1003.501 [Amended]

In § 1003.501(b)(43), the reference is amended to read "§ 1002.201 (b)(21)(ix)."

Subpart H—Price Negotiation Policies and Techniques

§ 1003.807-3 [Amended]

In § 1003.807-3(b), the reference "§ 3.807-3(b) (1), (2), and (3)" is amended to read: "§ 3.807-3(a) (1), (2), and (3)."

PART 1004—SPECIAL TYPES AND METHODS OF PROCUREMENTS

Subpart A—Procurement of Construction

§ 1004.101-53 [Amended]

1. In § 1004.101-53(a), the phrase "(see § 1007.4307-2 of this subchapter)" is deleted.
2. In § 1004.150-5(a)(2), subdivision (ii) is set forth to amend the references, as follows:

§ 1004.150-5 Procedures.

(a) * * *

(2) * * *

(ii) Technical proposals submitting data marked according to § 3.507-1 of this title will be accepted and handled according to § 3.507-1 of this title.

* * * * *

Subpart W—Food Services Contracts

In § 1004.2302, paragraph (a) is set forth to amend the AFR reference, as follows:

§ 1004.2302 Use and administration of food services contracts.

(a) *General.* (1) Base utilization of contractual feeding is subject to Hq USAF approval. No procurement will be initiated until approval according to AFM 146-1 (Food Service Management), has been attained. Section 1007.5005 of this subchapter and subparagraph (2) of this paragraph are not mandatory outside the United States. However, if a requirement type contract is used, the use of Schedules clause in § 1007.5005 of this subchapter is mandatory.

* * * * *

Subpart XX—Nonappropriated Fund Contracts

1. In § 1004.5002-3, paragraph (f) is amended to delete the second reference; in paragraph (g), subparagraph (3) is amended by the deletion of the reference, and subdivision (vi) is deleted and reserved, as follows:

§ 1004.5002-3 Construction or architect engineer contracts funded completely with nonappropriated funds.

* * * * *

(f) *Clauses for construction contracts.* All required clauses and special provisions contained or referred to in Subpart F, Part 7 of this title, will be used except as follows:

* * * * *

(g) * * *

(3) Use all required clauses, applicable clauses, required schedule provision, and applicable schedule provisions contained or referred to in Subpart F, Part 7 of this title, except as follows:

* * * * *

(vi) [Reserved]

* * * * *

PART 1005—INTERDEPARTMENTAL AND COORDINATED PROCUREMENT

Subpart L—Commodity Assignment

In § 1005.1201-50(a), subparagraph (1) is set forth to delete the reference, as follows:

§ 1005.1201-50 Procurement of lumber and allied products—FSG 55.

(a) * * *

(1) The total requirement for any single purchase action is less than one rail carload lot (36,000 pounds) for standard commercial items or one truckload lot (18,000 pounds or less) for all other items.

* * * * *

PART 1006—FOREIGN PURCHASES

Subpart U—Procurement Services for the Federal Republic of Germany

In § 1006.2103, paragraphs (a) and (f) are set forth to amend the AFRs, as follows:

§ 1006.2103 Policies.

* * * * *

(a) Procurements will be limited to domestic source and products. Procurement services should be expedited as much as possible using procedures established in AFM 400-3 (Military Assistance Sales).

* * * * *

(f) In addition to charges made under AFM 400-3, an additional charge of 5 percent of the purchase price of the articles or services procured should be made to reimburse general expenses incurred for normal contract administration including testing, inspection, and quality control. Specific services requested by the FRG, such as special inspection or testing services over and above those normally performed, will be charged and reimbursed at cost. The FRG may request a reduction in the percentage charged for a single procurement exceeding $10,000,000 in value. Questions relating to fee reductions will be referred to Hq USAF (AFSMS-CD-MS) for clarification and appropriate action.

* * * * *

PART 1007—CONTRACT CLAUSES

Subpart B—Clauses for Cost-Reimbursement Type Supply Contracts

1. Sections 1007.204 and 1007.204-12 are set forth to amend the references, as follows:

§ 1007.204 Clauses to be used when applicable.

Clauses included in DD Form 748 which are inapplicable to a contract may be deleted according to § 7.105-1 of this title.

§ 1007.204-12 Military security requirements.

See § 7.104-12 of this title.

§ 1007.205 [Amended]

2. Section 1007.205 is amended by the deletion of the text.

Subpart C—Clauses for Fixed-Price Research and Development Contracts

§§ 1007.302-25; 1007.303-12; 1007.303-15 [Deleted]

Sections 1007.302-25, 1007.303-12, and 1007.303-15 are deleted.

Subpart D—Clauses for Cost-Reimbursement Type Research and Development Contracts

§ 1007.402-24 [Deleted]

1. Section 1007.402-24 is deleted.
2. Section 1007.403-15 is set forth to amend the reference, as follows:

§ 1007.403-15 Quality control system.

See § 7.104-28 of this title, except that the clause prescribed therein need not be included in contracts with nonprofit institutions or organizations receiving no fee.

Subpart U—Clauses for Fixed-Price Nonpersonal Service Contracts

§§ 1007.2103-5; 1007.2104-3; 1007.2104-6 [Deleted]

1. Sections 1007.2103-5, 1007.2104-3, and 1007.2104-6 are deleted.
2. Section 1007.2104-4 is amended as follows:

§ 1007.2104-4 Government-furnished property.

According to the requirements of § 13.702 of this title and § 1013.502 of this subchapter, insert the clause in § 13.702 of this title.

Subpart V, Clauses for Technical Services Contracts, is deleted.

Subpart X—Clauses, Schedule Provisions, and Exhibits for Instruction of Military Personnel at Civilian Schools, Colleges, and Universities

Section 1007.2401 and the introductory portion of § 1007.2408 is set forth to amend the AFR reference, as follows:

§ 1007.2401 Limitation on use.

Contracts for instruction of military personnel as their full time duty assignment at civilian colleges and universities will be issued only by (a) the USAF Institute of Technology, Wright-Patterson Air Force Base, and (b) Air Training Command for foreign language training. Contracts for instruction of military personnel at schools, colleges, and universities issued under the provisions of AFM 213-1 (Operation and Administration of the Air Force Education Services Program) may be issued by any authorized contracting office and if over $500 will contain the clauses set forth in §§ 1007.2403 through 1007.2407–2 as changed by § 1007.2408.

§ 1007.2408 Changes to be made for contracts issued under Air Force Manual 213–1.

The following changes will be made in clauses set forth in §§ 1007.2403 through 1007.2407–2 in contracts which are issued pursuant to AFM 213–1.

* * * * *

Subpart II—Clauses for Packing and Crating Contracts

Section 1007.3505–4 is revised to read as follows:

§ 1007.3505–4 Alterations in contract.

Insert the clause in § 7.105–1 of this title.

Subpart JJ—Contracts for Care of Remains

1. Section 1007.3604–5 is revised to read as follows:

§ 1007.3604–5 Assignment of claims.

Insert the clause in § 7.103–8 of this title.

§ 1007.3604–18 [Deleted]

2. Section 1007.3604–18 is deleted.

3. Section 1007.3605–2 is set forth to amend the last reference, as follows:

§ 1007.3605–2 Government-furnished property.

If an Air Force Aerial Port of Entry is to be a using activity, insert the clause in § 13.702 of this title.

Subpart LL—Basic Agreement Provisions

In § 1007.3803–5, Provision No. 4 is revised to read as follows:

§ 1007.3803–5 Section C—letter contract provisions.

* * * * *

4. Termination (See § 7.802–1 of this title).

Subpart PP—Clauses for Contracts Issued by Foreign Procurement Activities

1. In § 1007.4205–9, paragraph (c) is set forth to delete one of the references, as follows:

§ 1007.4205–9 Patent and data clauses.

* * * * *

(c) *Patent indemnification of Government by contractor.* The clauses of § 9.103 of this title will be used only under the conditions of paragraph (b) of this section, in which case the instructions of § 9.103–3 of this title are applicable.

* * * * *

2. Sections 1007.4207–13 and 1007.4208–5 are revised to read as follows:

§ 1007.4207–13 Termination for convenience of the United States Government.

Insert the clause set forth in Subpart F, Part 18 of this title.

§ 1007.4208–5 Government-furnished property.

See § 13.702 of this title.

3. Section 1007.4210(a) is set forth to amend the reference, as follows:

§ 1007.4210 Construction contracts; special provisions.

(a) Insert the special provisions as set forth in § 7.602 of this title, except that the following special provisions will be omitted: 1–07, Standard Test, Quality and Guarantees; 1–08, Preservation of Existing Vegetation; 1–17, Shop Drawings; 1–20, Domestic Articles; 1–18, Rates of Wages. The words "U.S. Standard Form 23 attached hereto" and "Standard Form 23 attached hereto" will be omitted from SP 1–01(a) and SP 1–01(c) and will be replaced by "the Statement of Work on the cover sheet" and "on the cover sheet as the amount of contract," respectively. Contracting officers may omit any of the other special provisions in § 7.602 of this title that cannot be complied with because of local conditions. In all of these special provisions the words "United States" will be inserted before the word "Government" whenever the latter word appears.

* * * * *

Subpart SS—Clauses for Fixed-Price Type Maintenance, Overhaul, and Modification Contracts

1. Sections 1007.4503–5, 1007.4504, and 1007.4504–1 are revised to read as follows:

§ 1007.4503–5 Government-furnished property.

Insert the clause in § 13.702 of this title. If the contract provides for the reimbursement for parts and direct materials on a cost basis, follow § 13.708 of this title, but limit applicability to cost reimbursement items.

§ 1007.4504 Clauses to be used when applicable.

The clauses appearing in §§ 7.104 through 7.104–54 of this title will be used according to the instructions pertaining thereto unless otherwise provided herein.

§ 1007.4504–1 Special clauses.

Insert applicable clauses of Subpart NN of this part according to the instructions therein. (e.g., §§ 14.104–3 of this title and 1007.4065 of this part.)

Subpart TT—Clauses for Cost-Reimbursement Type Maintenance Overhaul and Modification Contracts

Sections 1007.4603–2 and 1007.4604–50 are revised to read as follows:

§ 1007.4603–2 Government property.

Insert the clause in § 13.703 of this title.

§ 1007.4604–50 Special clauses.

Insert applicable clauses of Subpart NN of this part, according to instructions therein.

Subpart VV—Clauses and Schedule Provisions for Flight Instruction of AFROTC Personnel at Civilian Colleges and Universities

§ 1007.4803–12 [Deleted]

Section 1007.4803–12 is deleted.

Subpart WW—Clauses for Basic Agreements for Communication Services

Section 1007.4902–16 is revised to read as follows:

§ 1007.4902–16 Patent indemnity.

Insert the clause set forth in § 9.103–1 (a) of this title, substituting the following for "If the amount of this contract is in excess of $5,000":

As to all orders placed under the contract for communications services and facilities for which rates, charges, and tariffs are not established by a governmental regulatory body,

Subpart XX—Clauses for Food Service Contracts

1. Section 1007.5003–13 is revised to read as follows:

§ 1007.5003–13 Assignment of claims.

Insert the clause set forth in § 7.103–8 of this title.

§ 1007.5003–24 [Deleted]

2. Section 1007.5003–24 is deleted.

PART 1008—TERMINATION OF CONTRACTS

Subpart G—Clauses

Section 1008.753 is revised to read as follows:

§ 1008.753 Termination clause for facilities contracts.

See Subpart G, Part 7 of this title.

PART 1009—PATENTS, DATA, AND COPYRIGHTS

Subpart A—Patents

In § 1009.103–3, the parenthetical phrase is amended. This section now reads as follows:

§ 1009.103–3 Patent indemnification in negotiated contracts.

No patent indemnity clause is required in contracts with educational institutions, including such contracts which call for the furnishing of facilities as an incident to the performance of research or development work. (See §§ 1013.402–50 of this subchapter and Subpart G, Part 7 of this title, for facilities contracts.)

Subpart J—Processing of Purchase Requests and Military Interdepartmental Purchase Requests

§ 1009.1001 [Amended]

In § 1009.1001(a), the last sentence is deleted.

PART 1010—BONDS AND INSURANCE

Subpart C—Insurance; General

§ 1010.303 [Amended]

In § 1010.303, the text is deleted.

Subpart E—Insurance Under Cost-Reimbursement Type Contracts

In § 1010.501–4, the reference in paragraph (d) is amended to read: "Subpart G, Part 13 of this title."

PART 1011—FEDERAL, STATE, AND LOCAL TAXES

Section 1011.054 is set forth to amend the reference to Subchapter C, as follows:

§ 1011.054 Disputed tax matters.

Report all matters reaching a point of dispute with taxing authorities regarding the validity of, or refunds for taxes imposed upon or assessed against contractors under cost type contracts or under fixed-price type contracts containing a tax escalation clause or any tax dispute involving the Air Force, directly to The Judge Advocate General, Hq USAF, according to Part 844, Subchapter D of this chapter, with a detailed factual statement thereon. Enter into negotiations with Federal, State, or local tax officials as authorized by Hq USAF. Forward any matter or question regarding Federal, State, or local taxes to be submitted to or cleared with the Secretary of the Air Force, his special representative, or other agencies of the Government (Federal, State, or local), through the staff judge advocate of the major air command to Hq USAF (AFJALF), Washington, D.C., 20330. If the exigencies of the situation require, report by teletype or telegraph.

PART 1012—LABOR

Subpart D—Labor Standards in Construction Contracts

In § 1012.401–50, paragraph (d) is amended by the deletion of one of the references. As amended, paragraph (d) now reads as follows:

§ 1012.401–50 Definitions.

* * * * *

(d) A construction contract for purposes of § 12.403–1 of this title is in excess of $2,000 if the contract is in an actual amount (not merely an estimated amount) in excess of $2,000. A contract initially $2,000 or less which is later increased over that amount by supplemental agreement or change order is in excess of $2,000 from the effective date of such a change in the contract amount, and the requirements of the Davis-Bacon Act, if otherwise applicable, are applicable to that part of the contract which has not been performed on such date.

Subpart F—Walsh-Healey Public Contracts Act

§ 1012.604 [Amended]

In § 1012.604(b) (1) and (c) the words "from Air Force Publications Distribution Center, Washington, D.C." are deleted.

Subpart G—Fair Labor Standards Act of 1938

In § 1012.702 the reference to Subchapter C is amended. This section now reads as follows:

§ 1012.702 Suits against Government contractors.

Contractors' requests for approval of private counsel for the defense of Fair Labor Standards Act suits under Cost or Cost-Plus-a-Fixed-Fee contracts will be processed for approval action according to Part 844, Subchapter D of this chapter.

PART 1013—GOVERNMENT PROPERTY

Subpart A—General

In § 1013.102–3(b), the first reference is deleted; in paragraph (c) the introductory portion is amended to delete the reference and subparagraph (2) is deleted. These portions now read as follows:

§ 1013.102–3 Facilities.

* * * * *

(b) Each procurement contract, facilities contract, lease or other agreement which provides Government-owned facilities, will contain clauses or provisions stating whether the facilities may be used on a charge or no-charge basis (see §§ 1007.2905–5 and 1007.4052 of this subchapter, and §§ 1013.402 and 1013.407 of this part). A facilities contract, lease, or agreement under which facilities are held by a contractor will require the periodic payment of a use-charge unless such use-charge is not required according to terms of prime procurement contracts and subcontracts. Where facilities are used without charge, the contract file of the facilities contract, lease, or agreement under which facilities are provided will be documented, by the administering office, to indicate the procurement contracts, subcontracts, or other basis that authorize no-charge use of Government facilities.

(c) Project approval shall be made as follows:

* * * * *

(2) [Deleted]

* * * * *

Subpart D—Industrial Facilities

1. In § 1013.401(b), the reference "§ 13.402" is amended to read: "§ 13.303"; and in paragraph (d)(4) the last sentence is amended to delete a reference, as follows:

§ 1013.401 Award of procurement contracts.

* * * * *

(d) * * *

(4) * * * Requests for approvals will be supported by full justification for the proposed action (see § 1013.407).

* * * * *

2. In § 1013.402, the reference "§ 13.402" is amended to read "§ 13.303 (b) (1) through (4)" in the introductory portion, and paragraph (b) is revised to read as follows:

§ 1013.402 Separate facilities contract.

* * * * *

(b) Construction work: See § 1013.402–50.

* * * * *

(Sec. 8012, 70A Stat. 488; 10 U.S.C. 8012)

By order of the Secretary of the Air Force.

FREDERICK A. RYKER,
Lt. Col., U.S. Air Force, Chief, Special Activities Group, Office of The Judge Advocate General.

[F.R. Doc. 65–13677; Filed, Dec. 22, 1965; 8:45 a.m.]

Title 49—TRANSPORTATION

Chapter I—Interstate Commerce Commission

SUBCHAPTER A—GENERAL RULES AND REGULATIONS

[S.O. 948; Amdt. 4]

PART 95—CAR SERVICE

Chicago, Rock Island and Pacific Railroad Co. Authorized To Operate Over Trackage of Union Pacific Railroad

At a session of the Interstate Commerce Commission, Railroad Safety and Service Board, held in Washington, D.C., on the 15th day of December A.D. 1965.

Upon further consideration of Service Order No. 948 (29 F.R. 564, 5757, 18426, 30 F.R. 8269) and good cause appearing therefor:

It is ordered, That § 95.948 *The Chicago, Rock Island and Pacific Railroad Co. authorized to operate over trackage of Union Pacific Railroad*, of Service Order No. 948, be, and it is hereby amended by substituting the following paragraph (d) for paragraph (d) thereof:

(d) Expiration date: This order shall expire at 11:59 p.m., June 30, 1966, unless otherwise modified, changed, or suspended by order of this Commission.

Effective date. This amendment shall become effective at 11:59 p.m., December 31, 1965.

(Sec. 1, 12, 15, 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15. Interprets or applies Sec. 1(10–17), 15(4), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10–17), 15(4))

It is further ordered, That copies of this order and direction shall be served upon the State Corporation Commission of Kansas and upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; and that notice of this order shall be given to the general public by depositing a copy in the office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Safety and Service Board.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 65-13696; Filed, Dec. 22, 1965; 8:46 a.m.]

[S.O. 949; Amdt. 4]

PART 95—CAR SERVICE

Atchison, Topeka and Santa Fe Railway Co. Authorized To Operate Over Trackage of Union Pacific Railroad

At a Session of the Interstate Commerce Commission, Railroad Safety and Service Board, held in Washington, D.C. on the 15th day of December A.D. 1965.

Upon further consideration of Service Order No. 949 (29 F.R. 564, 5757, 18427, 30 F.R. 8269) and good cause appearing therefor:

It is ordered, That § 95.949 *The Atchison, Topeka and Santa Fe Railway Co. authorized to operate over trackage of Union Pacific Railroad* of Service Order No. 949, be, and it is hereby amended by substituting the following paragraph (d) for paragraph (d) thereof:

(d) Expiration date: This order shall expire at 11:59 p.m., June 30, 1966, unless otherwise modified, changed, or suspended by order of this Commission.

Effective date. This amendment shall become effective at 11:59 p.m., December 31, 1965.

(Sec. 1, 12, 15, 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15. Interprets or applies Sec. 1(10-17), 15(4), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4))

It is further ordered, That copies of this order and direction shall be served upon the State Corporation Commission of Kansas and upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement, and that notice of this order shall be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Safety and Service Board.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 65-13697; Filed, Dec. 22, 1965; 8:46 a.m.]

[S.O. 950; Amdt. 4]

PART 95—CAR SERVICE

Chicago, Burlington & Quincy Railroad Co. Authorized To Operate Over Trackage of Union Pacific Railroad

At a Session of the Interstate Commerce Commission, Railroad Safety and Service Board, held in Washington, D.C., on the 15th day of December, A.D., 1965.

Upon further consideration of Service Order No. 950 (29 F.R. 565, 5757, 18427, 30 F.R. 8163) and good cause appearing therefor:

It is ordered, That § 95.950 *The Chicago, Burlington & Quincy Railroad authorized to operate over trackage of Union Pacific Railroad* of Service Order No. 950, be, and it is hereby amended by substituting the following paragraph (d) for paragraph (d) thereof:

(d) Expiration date. This order shall expire at 11:59 p.m., December 31, 1966, unless otherwise modified, changed, or suspended by the order of this Commission.

Effective date. This amendment shall become effective at 11:59 p.m., December 31, 1965.

(Secs. 1, 12, 15, 24, Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15. Interprets or applies Secs. 1(10-17), 15(4), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4))

It is further ordered, That copies of this order and direction shall be served upon the State Corporation Commission of Kansas and upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; and that notice of this order shall be given to the general public by depositing a copy in the office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Safety and Service Board.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 65-13698; Filed, Dec. 22, 1965; 8:46 a.m.]

[S.O. 953; Amdt. 2]

PART 95—CAR SERVICE

Free Time on Unloading Box Cars at Ports

At a Session of the Interstate Commerce Commission, Division 3, held at its office in Washington, D.C., on the 15th day of December, A.D., 1965.

Upon further consideration of Service Order No. 953 (29 F.R. 1570, 18506) and:

It appearing, that a critical shortage of box cars continues to exist, that such cars are being delayed unduly in unloading at ports and that free time published in tariffs for unloading such cars aggravates the shortage, impeding the use, control, supply, movement, distribution, exchange, interchange, and return of such cars; it is the opinion of the Commission that the continuance of the emergency requires the order of January 24, 1964, to remain in effect for an additional period of time to promote car service in the interest of the public and the commerce of the people.

It is ordered, That § 95.953 *Free Time on unloading box cars at ports,* of Service Order No. 953, be, and it is hereby amended by substituting the following paragraph (g) for paragraph (g) thereof:

(g) *Expiration date.* This order shall expire at 11:59 p.m., December 31, 1966, unless otherwise modified, changed, or suspended by order of this Commission.

Effective date. This amendment shall become effective at 11:59 p.m., December 31, 1965.

(Secs. 1, 12, 15, 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15. Interprets or applies Secs. 1(10-17), 15(4), 40 Stat. 101, as amended 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4))

It is further ordered, That a copy of this amendment shall be served upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; and that notice of this order shall be given to the general public by depositing a copy in the office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Division 3.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 65-13699; Filed, Dec. 22, 1965; 8:46 a.m.]

[Third Rev. S.O. 562; Amdt. 1]

PART 97—ROUTING OF TRAFFIC

Rerouting of Traffic; Appointment of Agents

At a Session of the Interstate Commerce Commission, Division 3, held at its office in Washington, D.C., on the 15th day of December, A.D. 1965.

Upon further consideration of Third Revised Service Order No. 562 (30 F.R. 13375) and good cause appearing therefor:

It is ordered, That § 97.562 *Rerouting of traffic—appointment of agents* of Third Revised Service Order No. 562, be, and it is hereby amended by substituting the following paragraph (d) for paragraph (d) thereof:

(d) Expiration date: This order shall expire at 11:59 p.m., December 31, 1966, unless otherwise modified, changed, or suspended by the order of this Commission.

Effective date. This amendment shall become effective at 11:59 p.m., December 31, 1965.

(Secs. 1, 12, 15, 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15. Interprets or applies Secs. 1(10-17), 15(4), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4))

It is further ordered, That a copy of this order and direction shall be served upon each State railroad regulatory body, the Association of American Railroads, Car Service Division, and upon the American Short Line Railroad Association as agents of the railroads subscribing to the car service and per diem agreement under the terms of that agreement, and that notice of this order be given to the general public by depositing a copy in the office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Division 3.

[SEAL] H. Neil Garson,
Secretary.

[F.R. Doc. 65-13700; Filed, Dec. 22, 1965; 8:46 a.m.]

Title 50—WILDLIFE AND FISHERIES

Chapter I—Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service, Department of the Interior

PART 28—PUBLIC ACCESS, USE AND RECREATION

Kenai National Moose Range, Alaska

The following special regulation is issued and is effective on date of publication in the Federal Register.

§ 28.28 Special regulations, public access, use and recreation; for individual wildlife refuge areas.

Alaska

KENAI NATIONAL MOOSE RANGE

The use of lightweight, motorized vehicles commonly identified by the general term "snow-traveler" is permitted on areas of the Kenai National Moose Range that are closed to travel by conventional vehicles, subject to the following special conditions:

1. The use of "snow-travelers" will be permitted only during the period January 1–March 31, 1966.
2. Only "snow-travelers" with an overall width of 46" or less will be permitted.
3. The use of "snow-travelers" as an aid in big-game hunting or for transporting big game is prohibited.

"Snow-travelers" are excepted from the above special regulations when used on roads within the Range open to conventional vehicle travel. When used on such roads "snow-travelers" are subject to regulations applicable to conventional vehicles. The provisions of this special regulation supplement the regulations which govern public access, use and recreation on wildlife refuge areas generally, which are set forth in Title 50, Code of Federal Regulations, Part 28, and are effective through December 31, 1966.

Paul T. Quick,
Regional Director, Portland, Oreg.

December 13, 1965.

[F.R. Doc. 65-13680; Filed, Dec. 22, 1965; 8:45 a.m.]

PART 33—SPORT FISHING

Lake Ilo National Wildlife Refuge, N. Dak.

The following special regulation is issued and is effective on date of publication in the Federal Register.

§ 33.5 Special regulations; sport fishing; for individual wildlife refuge areas.

North Dakota

LAKE ILO NATIONAL WILDLIFE REFUGE

Sport fishing on the Lake Ilo National Wildlife Refuge, Dunn Center, N. Dak., is permitted only on the area designated by signs as open to fishing. This open area comprising 1,300 acres is delineated on maps available at refuge headquarters and from the office of the Regional Director, Bureau of Sport Fisheries and Wildlife, 1006 West Lake Street, Minneapolis, Minn., 55408. Sport fishing shall be in accordance with applicable state regulations subject to the following special conditions:

(1) The open season for Sport Fishing on the refuge extends from December 18, 1965, through March 27, 1966, daylight hours only. The provisions of this special regulation supplement the regulations which govern fishing on wildlife refuge areas generally are set forth in Title 50, Part 33, and are effective through March 27, 1966.

R. W. Burwell,
Regional Director, Bureau of Sport Fisheries and Wildlife, 1006 West Lake Street, Minneapolis, Minn., 55408.

[F.R. Doc. 65-13679; Filed, Dec. 22, 1965; 8:45 a.m.]

PART 33—SPORT FISHING

Moosehorn National Wildlife Refuge, Maine

The following special regulation is issued and is effective on date of publication in the Federal Register.

§ 33.5 Special regulations: sport fishing, for individual wildlife refuge areas.

Maine

MOOSEHORN NATIONAL WILDLIFE REFUGE

Sport fishing on the Moosehorn National Wildlife Refuge, Calais, Maine, is permitted from January 1, 1966, through October 31, 1966, on the areas designated by signs as open to fishing. These open areas, comprising 500 acres, are delineated on maps available at refuge headquarters and from the office of the Regional Director, Bureau of Sport Fisheries and Wildlife, U.S. Post Office and Courthouse, Boston, Mass., 02109. Sport fishing shall be in accordance with all applicable State regulations subject to the following special condition:

(1) The use of boats with motors is not permitted.

The provisions of this special regulation supplement the regulations which govern fishing on wildlife refuge areas generally which are set forth in Title 50, Part 33, and are effective through October 31, 1966.

Richard E. Griffith,
Regional Director, Bureau of Sport Fisheries and Wildlife.

December 14, 1965.

[F.R. Doc. 65-13705; Filed, Dec. 22, 1965; 8:46 a.m.]

Title 46—SHIPPING

Chapter IV—Federal Maritime Commission

[General Order 16]

PART 502—RULES OF PRACTICE AND PROCEDURE

Satisfaction of Complaint

The Federal Maritime Commission published in the Federal Register on October 26, 1965 (30 F.R. 13604) final rules of practice and procedure before the Commission, to become effective December 1, 1965.

Inadvertently, there was omitted from § 502.93 *Satisfaction of complaint* a phrase which reflects an agency practice of long standing, requiring that when a settlement is made in a proceeding, the statement filed with the Commission shall set forth certain specified information.

In order to correct the obvious oversight and to include in the final rules of practice and procedure before the Commission its standard practice of long standing, the second sentence of § 502.93 of said rules of practice and procedure as published October 26, 1965 is corrected to read as follows: "Such a statement, which may be by letter, shall show the amount of reparation agreed upon; shall contain the data called for by Appendix I(4), insofar as said form is applicable; and shall state that a like adjustment has been or will be made by respondent with other persons similarly situated."

Dated: December 20, 1965.

By the Commission.

Thomas Lisi,
Secretary.

[F.R. Doc. 65-13721; Filed, Dec. 22, 1965; 8:47 a.m.]

Proposed Rule Making

DEPARTMENT OF AGRICULTURE

Consumer and Marketing Service

[7 CFR Parts 1073, 1074]

[Docket Nos. AO-173-A17, AO-249-A7]

MILK IN WICHITA, KANS., AND SOUTHWEST KANSAS MARKETING AREAS

Decision on Proposed Amendments to Tentative Marketing Agreements and to Orders

Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), a public hearing was held at Wichita, Kans., on November 16 and 17, 1965, pursuant to notice thereof issued on October 5, 1965 (30 F.R. 12847).

Upon the basis of the evidence introduced at the hearing and the record thereof, the Deputy Administrator, Regulatory Programs, on December 8, 1965 (30 F.R. 15326; F.R. Doc. 65-13263), filed with the Hearing Clerk, U.S. Department of Agriculture, his recommended decision containing notice of the opportunity to file written exceptions thereto.

The material issues, findings and conclusions, rulings, and general findings of the recommended decision (30 F.R. 15326; F.R. Doc. 65-13263) are hereby approved and adopted and are set forth in full herein:

The material issues on the record of the hearing relate to:

1. Merger of the Wichita, Kans. and Southwest Kansas orders with inclusion of additional territory in the marketing area.
2. Milk to be priced and pooled.
3. Classification and allocation.
4. Class prices.
5. Location adjustments to the Class I and producer prices.
6. Take out- pay back plan of distributing returns to producers.
7. Miscellaneous administrative and conforming changes.

This decision concerns itself only with the classification and pricing of skim milk and butterfat used to produce cottage cheese, as it applies to the present Wichita order. Decision on this matter as it affects the proposed merged and expanded marketing area, as well as all other issues, is deferred.

Findings and conclusions. The following findings and conclusions on the material issues are based on evidence presented at the hearing and the record thereof:

Wichita Class II milk price. The present Wichita, Kans. order Class II milk price should be 15 cents above the Class III price and the Class II classification provisions modified until such time as action may be taken on all issues of this hearing.

A proposal made by the cooperative associations representing 94 percent of the producers in the Wichita order and supported by handlers would decrease the Class II milk price (skim milk and butterfat used to produce cottage cheese) from 80 cents to 15 cents above the present Class III price for a temporary period pending action on the entire record of this hearing.

The present Wichita order classifies as Class II milk all skim milk and butterfat used to produce cottage cheese in plants approved for sale of cottage cheese in jurisdictions within the marketing area which require that cottage cheese be made from Grade A milk, and prices Class II milk at 80 cents over the Class III price.

The city of Wichita requires that cottage cheese be made from Grade A milk. Since it is the predominant population center of the present marketing area all pool plants presently producing cottage cheese are approved for sales in Wichita and the Class II milk price applies to all cottage cheese produced in these plants.

The present Class II classification and price were first effective in 1958. The price level was established on the basis of the requirement of the city of Wichita that cottage cheese be made from Grade A milk.

Since 1958 important changes have occurred that affect the competitive situation with respect to the sale of cottage cheese. Due to improved highways and methods of reclassification, distribution of handlers for cottage cheese and fluid milk products has changed extensively in recent years. Although the Wichita City ordinance still requires handlers who sell cottage cheese in the city to make it from Grade A milk, large amounts of cottage cheese made from Grade A milk in other markets, such as Kansas City, are sold in the city and in the Wichita marketing area. During the past year and a half, one substantial Wichita outlet for cottage cheese has changed its source of supply to a lower cost market from a local handler making cottage cheese from producer milk under this order.

Wichita handlers also compete extensively outside the Wichita area in other parts of the State of Kansas with handlers from these other markets. They have expanded their sales area extensively into western Kansas.

These changes have been gradual during the past seven years. They have now reached the point, however, where handlers are looking elsewhere for cheaper sources of supplies of milk or cottage cheese itself.

Handlers contended that the present Class II milk price for cottage cheese increased the cost, as compared to surrounding markets, 6 cents per pound of cottage cheese or 20 percent.

The cost of skim milk to handlers in other nearby marketing areas for cottage cheese is generally less than the cost to regulated handlers in this market. This is the price situation causing Wichita handlers to look elsewhere for either supplies of skim milk or bulk cottage cheese.

There was unanimity of both producers and handlers in the request for immediate action in lowering the present Wichita Class II price. This is an indication that the situation in the market today with respect to sales of cottage cheese has reached a point where there is real danger of further loss of sales of cottage cheese.

In view of the period of time required for consideration of the other issues of this hearing, separate prompt action should be taken to decrease the Class II price for the Wichita order. The classification provisions should also be changed to apply this price to all skim milk and butterfat used to produce cottage cheese, eliminating the present limitation with respect to plant approval for sale of cottage cheese in jurisdictions requiring Grade A approval.

Among the other issues open for consideration of the hearing is the pricing of Class II milk. Until such time as consideration can be given to the entire record with respect to pricing of both Class II and Class III milk, definite decision cannot be made concerning the precise level of the Class II milk price to be applicable for an indefinite period, or for pricing any milk other than that priced under the present Wichita order. However, for the interim period pending full consideration of all issues of the hearing, the proposal of cooperative associations and handlers appears to provide a reasonably appropriate basis for pricing Class II milk under the present Wichita order. It should be adopted for this purpose.

Rulings on proposed findings and conclusions. Briefs and proposed findings and conclusions were filed on behalf of certain interested parties. These briefs, proposed findings and conclusions and the evidence in the record were considered in making the findings and conclusions set forth above. To the extent that the suggested findings and conclusions filed by interested parties are inconsistent with the findings and conclusions set forth herein, the requests to make such findings or reach such conclusions are denied for the reasons previously stated in this decision.

General findings. The findings and determinations hereinafter set forth are supplementary and in addition to the findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto: and all of said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) The tentative marketing agreement and the order, as hereby proposed to be amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act;

(b) The parity prices of milk as determined pursuant to section 2 of the Act are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the marketing area, and the minimum prices specified in the proposed marketing agreement and the order, as hereby proposed to be amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest; and

(c) The tentative marketing agreement and the order, as hereby proposed to be amended, will regulate the handling of milk in the same manner as, and will be applicable only to persons in the respective classes of industrial and commercial activity specified in, a marketing agreement upon which a hearing has been held.

Rulings on exceptions. No exceptions were filed.

Marketing agreement and order. Annexed hereto and made a part hereof are two documents entitled respectively, "Marketing Agreement Regulating the Handling of Milk in the Wichita, Kans., Marketing Area", and "Order Amending the Order Regulating the Handling of Milk in the Wichita, Kans., Marketing Area", which have been decided upon as the detailed and appropriate means of effectuating the foregoing conclusions.

It is hereby ordered, That all of this decision, except the attached marketing agreement, be published in the FEDERAL REGISTER. The regulatory provisions of said marketing agreement are identical with those contained in the order as hereby proposed to be amended by the attached order which will be published with this decision.

Determination of representative period. The month of November is hereby determined to be the representative period for the purpose of ascertaining whether the issuance of the attached order, as amended and as hereby proposed to be amended, regulating the handling of milk in the Wichita, Kans., marketing area, is approved or favored by producers, as defined under the terms of the order, as amended and as hereby proposed to be amended, and who, during such representative period, were engaged in the production of milk for sale within the aforesaid marketing area.

Signed at Washington, D.C., on December 20, 1965.

GEORGE L. MEHREN,
Assistant Secretary.

Order[1] *Amending the Order Regulating the Handling of Milk in the Wichita, Kans., Marketing Area*

§ 1073.0 Findings and determinations.

The findings and determinations hereinafter set forth are supplementary and in addition to the findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto; and all of said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) *Findings upon the basis of the hearing record.* Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), a public hearing was held upon certain proposed amendments to the tentative marketing agreement and to the order regulating the handling of milk in the Wichita, Kans., marketing area. Upon the basis of the evidence introduced at such hearing and the record thereof, it is found that:

(1) The said order as hereby amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act:

(2) The parity prices of milk, as determined pursuant to section 2 of the Act, are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the said marketing area, and the minimum prices specified in the order as hereby amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest;

(3) The said order as hereby amended, regulates the handling of milk in the same manner as, and is applicable only to persons in the respective classes of industrial or commercial activity specified in, a marketing agreement upon which a hearing has been held.

Order relative to handling. It is therefore ordered, that on and after the effective date hereof, the handling of milk in the Wichita, Kans., marketing area shall be in conformity to and in compliance with the terms and conditions of the aforesaid order, as amended and as hereby amended, as follows:

The provisions of the proposed marketing agreement and order amending the order contained in the recommended decision issued by the Deputy Administrator, Regulatory Programs, on December 8, 1965, and published in the FEDERAL REGISTER on December 11, 1965 (30 F.R. 15326; F.R. Doc. 65-13263), shall be and are the terms and provisions of this order and are set forth in full herein.

1. Section 1073.41(b) is amended to read as follows:

§ 1073.41 Classes of utilization.

* * * * *

(b) Class II milk shall be all skim milk and butterfat used to produce cottage cheese;

* * * * *

2. Section 1073.51(b) is amended to read as follows:

§ 1073.51 Class prices.

* * * * *

(b) *Class II milk.* The price per hundredweight shall be the Class III price for the month, plus 15 cents.

* * * * *

[F.R. Doc. 65-13711; Filed, Dec. 22, 1965; 8:47 a.m.]

[7 CFR Part 1106]

[Docket No. AO-210-A18]

MILK IN OKLAHOMA METROPOLITAN MARKETING AREA

Notice of Recommended Decision and Opportunity To File Written Exceptions on Proposed Amendments to Tentative Marketing Agreement and to Order

Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), notice is hereby given of the filing with the Hearing Clerk of this recommended decision with respect to proposed amendments to the tentative marketing agreement and order regulating the handling of milk in the Oklahoma Metropolitan Marketing area. Interested parties may file written exceptions to this decision with the Hearing Clerk, U.S. Department of Agriculture, Washington, D.C., 20250, by the 10th day after publication of this decision in the FEDERAL REGISTER. The exceptions should be filed in quadruplicate. All written submissions made pursuant to this notice will be made available for public inspection at the office of the Hearing Clerk during regular business hours (7 CFR 1.27(b)).

Preliminary statement. The hearing on the record of which the proposed amendments, as hereinafter set forth, to the tentative marketing agreement and to the order as amended, were formulated, was conducted at Oklahoma City, on August 30, 1965, purusant to notice thereof which was issued August 17, 1965 (30 F.R. 10859).

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[1] This order shall not become effective unless and until the requirements of § 900.14 of the rules of practice and procedure governing proceedings to formulate marketing agreements and marketing orders have been met.

The material issues on the record of the hearing relate to:

1. Revision of producer definition and transfer provisions with respect to milk diverted from or to other order plants.
2. Adoption of a base-excess plan.
3. Location adjustments to handlers and producers.
4. Payments by handlers resulting from reclassification (on audit) of milk received from a cooperative association in its capacity as a handler for bulk tank milk of its members.
5. The classification of sour cream and of packaged fluid milk products in inventory.
6. Pricing of milk used to produce evaporated milk.
7. Regulation of plants doing business in more than one Federal order area.

Findings and conclusions. The following findings and conclusions on the material issues are based on evidence presented at the hearing and the record thereof:

1. The producer definition should exclude dairy farmers whose milk is diverted from a plant regulated by another order to a pool plant under this order. The transfer provision should provide classification for diversions, as well as transfers, to plants regulated by other orders.

Presently, the order excludes from the producer definition any person who has producer status under the Red River Valley order and whose milk is diverted directly from the farm to a pool plant under the Oklahoma Metropolitan order. Under the proposal considered at the hearing, the exclusion from the producer definition of such producers would not be limited to those associated with the Red River Valley order but would be extended to any dairy farmer whose milk was diverted directly from the farm to a pool plant under this order, if the dairy farmer retained producer status under any other milk order.

Cooperative associations in this market are called upon to use their manufacturing facilities as an outlet for milk of producers associated with several surrounding markets. The most economical and efficient method of handling excess supplies in surrounding markets, in many instances, is to move the milk directly from the farm to plants operated by these cooperative associations. Producer milk supplies under other orders that might be diverted to manufacturing facilities regulated under this order are so located, in many instances, that it is more economical to send such supplies to plants regulated under the Oklahoma Metropolitan order than to manufacturing facilities in their own market. In other instances a lack of local market manufacturing facilities is the reason milk is shipped to this market.

The proposed amendment would facilitate the efficient handling of milk which is surplus in other Federal orders without being detrimental to the Oklahoma Metropolitan pool. Under the present provisions of this order, milk diverted directly from the farms of dairy farmers that are producers under other orders to manufacturing plants regulated by this order is producer milk under the Oklahoma Metropolitan order and thus receipts of such milk decrease the order's blend and Class I prices. Milk so diverted from other orders is not a supply furnished to meet the Oklahoma Metropolitan demand for Class I milk. However, any Grade A milk received directly from a farm is now producer milk under the terms of this order and must be pooled accordingly. In the interest of providing a means to handle efficiently excess supplies of milk from other orders this order should be amended to exclude from the producer definition any person who has producer status under another order.

The exclusion should be limited, however, to the milk of any such person which is designated for Class II use by both the handler diverting such milk under the other order and the operator of the Oklahoma Metropolitan pool plant to which it is diverted. The provisions for assignment of other order milk not so designated were designed to apply to plant-to-plant shipments rather than farm to plant movements. When milk moved from the farm to a pool plant under this order is to share in the Class I sales of this market it should be priced and pooled under the order as producer milk.

There are occasions when it is more economical and efficient to divert milk from pool plants regulated by this order to plants regulated by another order. The transfer provisions should be amended to provide classification for diversion to an other order plant on the same basis as transfers. This will permit efficient and orderly movement of milk that may be located closer to manufacturing facilities in other markets than to manufacturing plants located in this market. Such diversions are possible, of course, only when the other order does not require such receipts to be pooled under its provisions.

2. A base and excess plan should be used in distributing among producers the payments for milk produced during the base-operating period of April through June. This plan would become effective beginning with the base-forming period of September through December in the fall of 1966.

The plan considered at this hearing is such as was authorized by the Agricultural Marketing Agreement Act prior to the enactment of the Agricultural Act of 1965, which added additional authority with respect to base-excess provisions while retaining all of the authority then contained in the Act with respect to such provisions. It has for its purpose distribution of payments to producers in accordance only with their seasonal patterns of production.

A base-excess plan of this nature was provided in this order from 1951 through the base-operating period in 1960. Proponents of the base-excess plan noted that their proposal for reinstatement of such a plan varies only in minor respects from the base-excess plan now operating in the nearby Red River Valley order. At the present time, two cooperative associations in the market are operating their own base-excess plan.

Since the base-excess plan was discontinued, production of milk during the fall months in relation to the annual average has decreased while at the same time production during the spring months has increased. For these reasons producers and handlers actively supported the reinstatement of a base-excess plan for the purpose of encouraging producers to level their production of milk seasonally to more nearly coincide with the market's demand for Class I milk. Producers requested that such a plan become effective with the base-forming period beginning September 1, 1966. Handlers would have the program start in the fall of 1965.

September through December are normally the months in which the production of milk for this market is lowest and the base-forming period would be limited to these months. The base-forming months of September through December also coincide with the base-forming period provided at the present time in the Red River Valley order. One of the cooperative associations in this market represents a majority of the producers in the Red River Valley order.

The base-excess plan that was formerly a part of this order was terminated subsequent to the base-operating period in the spring of 1960. To measure the change in the production pattern of producers a comparison of production per day per producer during the 5-year period 1955–1959 is made with the production pattern in the succeeding 5-year period. Such a comparison gives sufficient evidence of the need for reinstating the base-excess plan and for the specific months of the base-forming and base-operating months.

The 1955–1959 average of the September–December daily production per producer was 9 pounds greater than the annual average for these years; during the past 5 years, however, fall production was 5 pounds less than the annual average. Thus, it is noted that producers have had a tendency in the past 5 years to reduce fall production in relation to the annual average.

A similar comparison of production per producer for the April through June period shows that producers have increased production in the spring months over the past 5 years as compared with the annual average. During the past 5 years the April–June average daily production per producer exceeded the annual average by 86 pounds. During the previous 5 years the flush production exceeded the fall production by only 23 pounds.

A comparison of the annual daily production per producer during the September–December period with the following months of April through June shows that during the 5 years 1955–1959 the flush production exceeded the fall production by approximately 12 percent. A similar comparison for the past 5 years shows that the flush production was 23 percent greater than the fall production.

Perhaps the most significant change in the pattern of deliveries by producers is represented by comparing the last year of the base-excess plan with the delivery pattern of the year following. The production per day per producer was only 10 percent greater in the spring of 1960 as compared to the fall deliveries of September–December 1959. The following year, however, the April–June 1961 daily delivery rate exceeded the previous fall production by 22 percent.

It is concluded on the basis of these facts that there is a need for incentive for producers to reverse the present tendency to decrease their production in the fall months and increase deliveries in the spring months. The establishment of a base-excess plan as proposed herein, with a 4-month base-forming and 3-month base-operating period, should create an effective means of influencing producers to increase their fall production and decrease deliveries during the April–June period.

The 3 months of April through June are clearly and consistently the period when producers deliver the greatest quantity of milk. Proposals to include the months of March and July in the base-operating period are not justified. During each of the past 3 years March and July production have each been less than for any month of the April–June period. For the 3-year period, deliveries per producer have averaged 11 percent less in March, and 6 percent less in July, than the average of April–June deliveries.

Testimony was offered in favor of including January in the base-forming months. January deliveries per producer are usually slightly higher than the average of the preceding September–December period. For the past 10 years this increase has averaged about 5 pounds daily. There was little difference in the relationship of January deliveries to those of the preceding months between the period when the base plan was operating and the more recent years. It is evident that production in the September–December period has a substantial influence on that of January. It is therefore not necessary that January be included in the base-forming period.

The daily base of each producer would be calculated by the market administrator by dividing the total pounds of producer milk received at all pool plants from such producer during the base-forming months by the number of days' production delivered by such producer during such period, or by 90, whichever is more. Provision is made for a person who becomes a producer and who has delivered milk to a pool plant under another Federal order or who has made deliveries to a plant that did not qualify as a pool plant during each or any month of the base-forming period but which qualifies as a pool plant during any month of the base-operating period. A base would be calculated for such a person as if such receipts at such a plant or plants were received at a pool plant during the base-forming period.

For each of the months of April through June, separate uniform prices for base milk and excess milk would be computed so that Class I utilization would first be allotted to base milk. Base milk would be milk received at a pool plant from a producer during any of the months of April through June which is not in excess of an amount equal to the daily base of such producer multiplied by the number of days' production delivered in such month. Class II disposition in the market would first be assigned to excess milk. If Class I milk disposition is more than the base milk received from producers in any month, such additional Class I milk would be allocated to excess milk and the excess blend price increased accordingly.

To provide practical administration of this base-excess plan certain rules in connection with the establishment and transfer of bases are provided. These rules do not need to be unduly restrictive since the purpose of the plan is to simply encourage producers to deliver milk on a more even seasonal pattern throughout the year. The plan merely encourages individual producers to make changes in production plans to provide a supply of Grade A milk during the months of short supply and discourages production during the months when supplies of milk are already excessive. New producers may enter the market during any of 9 months of each year and receive the uniform price. A new producer can establish a base at his average daily delivery of milk by entering the market in July, August, or September without need of acquiring a base by transfer. In addition, new producers will be assigned a base on the basis of their deliveries to an other order plant or to a plant that becomes qualified as a pool plant after the base-forming period. A producer's base is effective for only a single 3-month period and each year each producer has the opportunity to make a new base. Thus, by the very nature of the provisions of this base-excess plan little or no monetary value ever accrues to the producer by the mere holding of an established base.

Under the provisions of this plan there is no need to limit the conditions under which a base may be transferred from one producer to another. To avoid unnecessary administrative detail, it is provided that an entire base may be transferred to any other person if proper application is made for such transfer.

If a base is held jointly, the entire base should be transferable to any other person if the joint holders agree. Also, if a base is transferred to a producer already holding a base, a new base for the producer should be computed in the same manner as provided for the original computation of a base. However, for the purpose of this computation, the producer milk delivered on the respective number of days' production during the base-forming period by each of the persons in whose names such bases were earned shall be considered to have been delivered on the same respective days by the producer for whom the new base is being computed. This procedure provides adequate safeguard to assure that when bases are combined as a result of transferring a base to a producer with a base, the resulting base will be the same as would be earned during the base-forming period by the combined milk production involved.

Proposals to make the base-excess plan effective immediately were opposed by producers. It was their contention that it would not be practical to do so and, moreover, commitments had been made that producers would be afforded adequate time to make necessary adjustment in their production patterns before the effective date of such a plan. Since the hearing was held at about the time the base-forming period would start, it is concluded that the first feasible effective date of the plan should be at the beginning of the base-forming period of 1966.

3. Location adjustments to handlers and producers should be revised. Present rates of adjustments should continue for all plants located 50 miles or more from the city hall in Oklahoma City and north of the northern boundaries of Beckham, Washita, Caddo, Canadian, Oklahoma, Pottawatomie, and Seminole Counties and east of the eastern boundaries of Seminole, Pontotoc, Johnston, or Marshall Counties, all in the State of Oklahoma. No location adjustment should apply at pool plants located in the State of Texas or in that portion of the State of Oklahoma, south and west of the above stated boundaries. Location adjustments to producers should also be likewise modified and apply only to base milk during the base-operating months of April through June.

Present provisions of the order provide for minus location adjustments, in any direction, at pool plants located 50 miles or more from the city hall in Oklahoma City.

Under the Federal order system markets located to the south and west of the concentrated midwestern milk production area have required higher prices to attract sufficient milk to supply their fluid needs. The midwestern area is the principal alternative source of supply for many such markets. This pattern of pricing prevails in the relationship between Oklahoma Metropolitan prices and those of the nearby Red River Valley, North Texas, and Texas Panhandle markets located to the south and west.

The Red River Valley Class I prices are in a constant relationship with the Oklahoma Metropolitan prices and vary from 7 cents higher at Ardmore, Okla., to 22 cents higher at Wichita Falls, Tex. The North Texas and Texas Panhandle Class I prices averaged 32 and 33 cents, respectively, above the Oklahoma Metropolitan prices during the 3-year period of 1962–64.

These markets to the south and west are not normally sources of supply for milk when this market needs additional supplies for Class I purposes. Occasionally, however, a handler operating under such orders develops sales in the Oklahoma Metropolitan marketing area to the extent that he becomes regulated under this order. The location adjustments presently provided under this order are evidently not required for such a handler to meet competitive conditions in the Oklahoma Metropolitan area or his sales would not have increased while he was paying the higher price of the other order. Their application to producer prices may seriously interfere with maintaining a supply of milk at his plant location.

A plant located at Ardmore, Okla., and usually regulated by the Red River Valley order, was a pool plant under this order from June 1964 through February 1965. As a pool plant under this order during this period of time the location adjustment was a minus 10 cents per hundredweight from the announced Class I and blend prices, whereas its price under the Red River Valley order had previously been 10 cents higher than the announced price. Since that time, the Red River Valley order has been amended and the Class I milk price to handlers at Wichita Falls, Tex., is 22 cents higher, at Lawton, Okla., 10 cents higher and at Ardmore, Okla., 7 cents higher than the Oklahoma Metropolitan Class I milk price.

A handler, now regulated by the Texas Panhandle order, located at Elk City, Okla., has increased sales in the Oklahoma Metropolitan marketing area to the extent that it is possible that in the near future this plant will be regulated under this order. Should this happen the present location adjustment under the Oklahoma Metropolitan order for such a plant would be a minus 10 cents. The actual Class I price in the Texas Panhandle order, as noted previously, has averaged 33 cents above the Oklahoma Metropolitan Class I prices during the past 3 years. The location adjustment under the Texas Panhandle order for the plant at Elk City, Okla., is a minus 21 cents, so that the Texas Panhandle price to this handler is about 12 cents higher than the Oklahoma Metropolitan price without location adjustment.

The above examples illustrate the need of modifying the application of minus location differentials as now provided in the order. If orderly marketing is to be maintained in this general area, no minus location adjustments should apply at plants located to the south and west of the Oklahoma Metropolitan marketing area. The order should provide that no such adjustment apply in the State of Texas, nor in the southwest portion of Oklahoma.

The proposed changes in the location adjustments to handlers along with the proposed changes in the regulation of plants subject to other Federal orders will maintain stability of marketing conditions to both handlers and producers in this and surrounding Federal milk order markets.

Class I price location adjustments will also be applicable to uniform prices paid producers. Modification of location differentials to handlers should likewise be reflected in a similar manner and for the same reasons in the applicable uniform prices paid producers. Since under the base-excess plan recommended herein base prices will reflect the value of Class I milk for which location adjustments apply, location differentials to producers will apply only on their base milk.

4. No change should be made on the basis of this record in the provisions relating to the classification, payments or audit adjustments of milk received by a handler from a cooperative association acting as a handler for milk of its members delivered in bulk tanks.

The order presently provides that such milk shall be classified by agreement (subject to a number of limitations), with the cooperative association paid class prices for such milk. The cooperative association in turn pays to or draws from the producer-settlement fund the difference between the value of such milk at class prices and its value at the uniform producer price. Under these provisions, when an audit of the handler's records results in a change of classification the market administrator must adjust the difference in value with the cooperative association which in turn must adjust with the handler.

To avoid this rather cumbersome procedure, many orders provide a more complete and uniform method whereby such milk is classified as producer milk of the handler, and payment for such milk is made to the cooperative association at the uniform producer price. When handlers are required to pay a cooperative association as a handler of bulk tank milk at the uniform price, the handler equalizes with the producer-settlement fund and is responsible for any change in classification found on audit.

Producer associations proposed that the present provisions be modified only to the extent that audit adjustments be made directly between the handler and the market administrator. While this proposal might ameliorate certain administrative problems presently encountered, it would not deal with other problems of essentially the same nature that are involved in the present system.

This record does not provide the basis for incorporating provisions which would provide for uniform treatment of the responsibility of handlers to the producer-settlement fund on both reported and audited utilization. It is concluded that action on this matter should be deferred until there is full opportunity to consider all of the provisions involved. Accordingly, it is concluded that no action should be taken to change the provisions with respect to audit adjustments on bulk tank milk.

5. No change should be made in the classification of sour cream; packaged fluid milk products in inventory should be classified as Class I milk.

Sour cream produced at both pool and nonpool plants is distributed in the marketing area. The regulations of health departments in the marketing area require that sour cream be made from Grade A milk.

The proponent of the proposal to classify sour cream as Class II milk contended that sour cream products produced at unregulated plants are distributed in the marketing area. He also pointed out that handlers have some competition in the sale of sour cream from handlers regulated by the Red River Valley order, which classifies this product as Class II milk.

The proponent does not process sour cream dips or other similar sour cream products in his pool plant but indicated that some other pool handlers do.

The record evidence is not adequate to make a change in the classification in sour cream. The proponent failed to indicate whether there was sour cream made from products other than Grade A milk being distributed in the market; whether sour cream was required to be labeled Grade A; or whether health departments provide different standards for sour cream than for sour cream products.

Sales of sour cream made from producer milk and distributed in the marketing area are not large. However, such sales during the past 3 years have increased both moderately and steadily.

Since sour cream is required to be produced from Grade A milk and the record evidence is inadequate to support a change in classification, producers should continue to receive the Class I price for skim milk and butterfat used to make sour cream. To classify sour cream as Class II milk under these circumstances would be inconsistent with the established practice of uniform pricing of products which must be made from Grade A milk.

Fluid milk products on hand in packaged form at the end of the month should be classified as Class I milk. Fluid milk products on hand at the end of the month in bulk form should continue to be classified as Class II.

Classification of packaged inventories of fluid milk products as Class I milk, rather than as Class II milk, will diminish the monetary importance of their exact location in the distribution system of the handler as of the end of the accounting period. Presently, administrative feasibility has generally required that inventories be restricted to those physically located in the plant where processed. Handlers have been paying the Class I milk price in 1 month for products disposed of from the processing plant, but held elsewhere in their distribution systems, and in the following month for inventories held in their processing plants. Under the system herein recommended, the extent of this difference will be substantially reduced or eliminated.

The adoption of the plan of classifying all fluid milk products on hand in packaged form at the end of the month as Class I milk will, in the long run, neither affect handlers' costs nor producers' returns. In the first month in which it is effective, it will increase handlers' costs by the difference between the Class I and Class II prices on the volume of packaged milk classified as inventory. This difference will be recovered, however, since there will be no reclassification charge on inventory of packaged fluid milk products allocated to Class I in subsequent months.

To insure that all handlers pay the current month's Class I price for fluid milk disposed of during the month, it is provided that if the Class I price increases over the previous month, the handler will be charged the difference between the Class I price for the current month and the Class I price for the preceding month on the quantity of ending inventory assigned to Class I milk in the preceding month. Likewise, if the Class I price decreases, the handler will receive a corresponding credit.

To accommodate this change in the classification of fluid milk products in packaged form in inventory, the allocation section of the order should provide that inventory of such packaged fluid milk products on hand at the beginning of the month be subtracted from Class I utilization immediately after the allocation of shrinkage and packaged fluid milk products from other orders and before making the other assignments therein provided. Inventory of fluid milk products in bulk form would continue to be handled as under the present provisions of the order.

It was proposed that a special definition of inventory be added to the order provisions. Since packaged fluid milk on hand within the plant, on loaded trucks or in distribution points will be classified uniformly as Class I milk, as provided herein, any special definition of inventory would not affect the monthly obligation of the operator of a pool plant and thus would serve no good purpose. As stated previously, the adoption of the plan to classify packaged fluid milk products as Class I milk will neither affect handlers' costs nor producers' returns. Its effect will merely price such fluid milk products in the month in which they are packaged and available for distribution in the following month. Such classification will eliminate the necessity of constantly reclassifying such fluid milk products in subsequent months.

6. There should be no change in the pricing of milk, skim milk, or cream used to produce evaporated milk.

It was proposed that milk, skim milk, or cream used to produce evaporated milk be priced seasonally, March through August, at 10 cents per hundredweight less than the Class II price. This would price these fluid milk products used to produce evaporated milk in the same manner as presently provided in the order for such products used to produce American cheese, butter, and nonfat dry milk. The proponent of this proposal purchases some fluid milk from a cooperative association under this order for manufacture into evaporated milk at his plant located at Coffeyville, Kans., and regulated by the Neosho Valley milk order. The proponent of this proposal also buys Grade A milk from handlers regulated by other nearby Federal orders. All evaporated milk produced at the proponent's Coffeyville, Kans. plant is made from Grade A milk.

Plants that receive most of the excess milk supplies of the Oklahoma Metropolitan market process such milk into American type cheese, butter or nonfat dry milk. Cooperative associations located at Oklahoma City and Tulsa operate such manufacturing plants. No pool plants or local manufacturing plants have facilities for the processing of evaporated milk. The manufacturing facilities of plants in the marketing area are sufficient to take care of the excess supplies of the market. In fact, a plant at Oklahoma City receives excess supplies from several other markets. Such shipments as are made to manufacturing plants outside the marketing area are made for reasons other than a need of finding a home for distressed milk. A representative of the cooperative association shipping milk to the proponent's plant in Kansas testified that such milk was not distressed milk but was sold for reasons advantageous to the cooperative association as compared to processing such milk in their own plant.

On the basis of this record, there is insufficient evidence to change the present method of arriving at the value of milk, skim milk or cream used to produce evaporated milk.

7. The present order provisions relating to a plant which simultaneously meets the pooling requirements of the Oklahoma Metropolitan and another Federal milk order should be modified to provide that a distributing plant which is a pool plant retains such status until the third month in which it has greater route distribution in the other marketing area, if the other order has complementary provisions.

The order now provides that if a handler disposes from a distributing plant a greater portion of Class I milk in an other order marketing area than in the Oklahoma Metropolitan marketing area and his plant is pooled in the other market, the handler shall be exempt from all but the reporting provisions of this order. If such a plant is not pooled under the other order, however, it would be fully regulated by the Oklahoma Metropolitan order. The order presently does not distinguish between distributing plants and supply plants in this respect.

The proponent handler stated that a so-called "lock-in" pooling provision would minimize month-to-month shifting of a distributing plant from one order to another. The proponent's plant located at Ardmore, Okla., was a pool plant under this order from June 1964 through February 1965 and a pool plant under the Red River Valley order at all other times. It was contended that more orderly marketing would result if the pooling of distributing plants having sales in two or more markets would not shift between orders immediately upon a change in the amount of sales from the plant into one or the other of the markets involved. It was suggested that a lag of 3 months in such a shift would give handlers an opportunity to make changes in their areas of operation which they might believe desirable in view of such impending month-to-month shifts.

The order should provide for such a "lock-in" provision. Under the circumstances described, a distributing plant should continue to be pooled under the Oklahoma Metropolitan order until the third consecutive month in which greater Class I milk distribution is made from the plant in an other marketing area than is made in the Oklahoma Metropolitan marking area. If the other order does not have a complementary pooling provision but requires that the plant be pooled under such other order, the plant should be exempt from all but the reporting provisions of the Oklahoma Metropolitan order.

The order also should exempt from full regulation a distributing plant doing a greater proportion of its total Class I milk business in the Oklahoma Metropolitan marketing area than in another order marketing area but which is subject, nevertheless, to full regulation under the other order. This latter provision will complement other Federal orders which have similar "lock-in" provisions.

The order should exempt also a supply plant which meets the pooling requirements under both this and another order if greater qualifying shipments from such plant are made during the month to plants regulated under another order than are made to plants regulated under the Oklahoma Metropolitan order. Such exemption should not apply during the months of January through August, however, if the operator of such plant chooses to retain automatic pooling status under the Oklahoma Metropolitan order during these months.

The proposed changes will be complementary to the pooling provisions effective in five markets to the South and West—North Texas, Central West Texas, Lubbock-Plainview, Red River Valley and the Texas Panhandle orders.

A cooperative association with producer-members in the other five orders mentioned above proposed that it be further provided that a distributing plant with Class I milk route disposition, exclusive of such distribution to military installations, which is greater in the Texas Panhandle marketing area than in the Oklahoma Metropolitan order should continue to be regulated by the Texas Panhandle order for a period of 18 months from the effective date of any such amendment. It was contended that such a provision would provide more orderly marketing in both orders.

At the present time, the operator of the distributing plant at Elk City, Okla., as a result of a number of military base contracts, has Class I milk disposition on routes in several marketing areas. He furnishes milk under contract to a military base in the Texas Panhandle marketing area, at which operations are to be discontinued, and to another in the Oklahoma Metropolitan marketing area, at which operations are to continue. It is possible that this may result in a larger proportion of this handler's sales being within the Oklahoma marketing area than in the Texas Panhandle area. It was contended that such a shift would lower the prices to the remaining producers in the Texas Panhandle order as much as 15 cents per hundredweight and thus possibly jeopardize an adequate supply of milk to the Texas Panhandle order. While it might be possible to avoid regulating this plant under the Oklahoma Metropolitan order by the establishment of a supply plant regulated under the Texas Panhandle order, this would be both inefficient and uneconomical.

The situation presented by the effect of sales made under limited term contracts to governmental bases or institutions in determining the Federal order under which a plant is regulated occasionally arises. While the general rule that a plant should be subject to the order in which it disposes of the most milk should continue, it is appropriate that provision may be made to exclude such contract sales under particular circumstances. In view of the possibility that plants other than the Texas Panhandle plant might be affected and the uncertainty as to the periods within which contract sales of this plant might be the determining factor of its regulation, it is concluded that provision should be made for consideration of such situations as and when they may occur.

Upon written application of a handler, the Secretary should be authorized to exclude for specified periods of time Class I dispositions to governmental institutions and bases under limited term contracts from consideration in determining the marketing area in which the greater proportion of Class I disposition is made. Written application for such a determination should be made by the handler at least 15 days before the first day of any month for which it is to be effective, so that there will be opportunity for proper review of the circumstances involved in arriving at a decision. This will also permit any such determination that is made to be known by all interested parties.

Rulings on proposed findings and conclusions. Briefs and proposed findings and conclusions were filed on behalf of certain interested parties. These briefs, proposed findings and conclusions and the evidence in the record were considered in making the findings and conclusions set forth above. To the extent that the suggested findings and conclusions filed by interested parties are inconsistent with the findings and conclusions set forth herein, the requests to make such findings or reach such conclusions are denied for the reasons previously stated in this decision.

General findings. The findings and determinations hereinafter set forth are supplementary and in addition to the findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto; and all of said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) The tentative marketing agreement and the order, as hereby proposed to be amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act;

(b) The parity prices of milk as determined pursuant to section 2 of the Act are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the marketing area, and the minimum prices specified in the proposed marketing agreement and the order, as hereby proposed to be amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest; and

(c) The tentative marketing agreement and the order, as hereby proposed to be amended, will regulate the handling of milk in the same manner as, and will be applicable only to persons in the respective classes of industrial and commercial activity specified in, a marketing agreement upon which a hearing has been held.

Recommended marketing agreement and order amending the order. The following order amending the order as amended regulating the handling of milk in the Oklahoma Metropolitan marketing area is recommended as the detailed and appropriate means by which the foregoing conclusions may be carried out. The recommended marketing agreement is not included in this decision because the regulatory provisions thereof would be the same as those contained in the order, as hereby proposed to be amended:

General amendments. 1. Section 1106.12 is revised to read as follows:

§ 1106.12 Producer.

"Producer" means any person, other than a producer-handler as defined in any order (including this part) issued pursuant to the Act, who under a dairy farm permit, authorization, or rating for the production of milk to be disposed of as Grade A milk issued by a duly constituted State or municipal health authority or by an agency of the Federal Government located in the marketing area, produces milk which is received at a pool plant directly from the farm of such person. This definition shall include any person meeting the above requirements whose milk is caused by a handler to be diverted from a pool plant to a nonpool plant for the account of such handler, and milk so diverted shall be deemed to have been received at the pool plant from which it is diverted for the purpose of determining location differentials pursuant to § 1106.81. This definition shall not include any person with respect to milk produced by him which is diverted to a pool plant from an other order plant if the other order designates such person as a producer under that order and the handler diverting such milk under the other order and the operator of the pool plant have each requested Class II classification in the reports of receipts and utilization filed with their respective market administrators. Neither shall it include any person with respect to milk produced by him which is diverted to an other order plant if such person is designated as a producer with respect to such milk under the other order.

2. Section 1106.30(f) is revised to read as follows:

§ 1106.30 Reports of receipts and utilization.

* * * * *

(f) The quantities of skim milk and butterfat contained in opening and closing inventories of fluid milk products separately in bulk and in packaged form; and

* * * * *

3. In § 1106.41, paragraphs (a) and (b)(7) are revised to read as follows:

§ 1106.41 Classes of utilization.

(a) Class I milk shall be all skim milk (including reconstituted skim milk) and butterfat:

(1) Disposed of in the form of fluid milk products except:

(i) Fluid milk products classified as Class II pursuant to paragraph (b) (2), (3), (4), and (8) of this section; and

(ii) Fluid milk products which are fortified with nonfat milk solids shall be Class I in an amount equal only to the weight of an equal volume of an unfortified product of the same butterfat content;

(2) In inventory of fluid milk products in packaged form on hand at the end of the accounting period; and

(3) Not specifically accounted for as Class II utilization; and

(b) * * *

(7) In inventory of fluid milk products in bulk form on hand at the end of the accounting period; and

* * * * *

4. In § 1106.44(e), the introductory text and subparagraph (3) are revised to read as follows:

§ 1106.44 Transfers.

* * * * *

(e) As follows, if transferred, or diverted pursuant to subparagraph (3) of this paragraph, to an other order plant in excess of receipts from such plant in the same category as described in subparagraph (1), (2), or (3) of this paragraph:

* * * * *

(3) If both the transferor handler and the operator of the transferee plant so request in the reports of receipts and utilization filed with their respective market administrators, transfers or diversions in bulk form shall be classified as Class II to the extent of the Class II utilization (or comparable utilization under such other order) available for such assignment pursuant to the allocation provisions of the transferee order;

* * * * *

5. In § 1106.46(a), a new subparagraph (2-a) is added immediately following subparagraph (2) and subparagraph (5) is revised, all of which now read as follows:

§ 1106.46 Allocation of skim milk and butterfat classified.

* * * * *

(a) * * *

(2-a) Except for the first month this provision is effective, subtract from the remaining pounds of skim milk in Class I milk, the pounds of skim milk in inventory of fluid milk products in packaged form on hand at the beginning of the accounting period;

* * * * *

(5) Subtract from the pounds of skim milk remaining in each class, in series

beginning with Class II, the pounds of skim milk in inventory of bulk fluid milk products (and, for the first month subparagraph (2-a) of this paragraph is effective, the pounds of fluid milk products in packaged form) on hand at the beginning of the accounting period;

* * * * *

6. Section 1106.53(a) is revised to read as follows:

§ 1106.53 Location adjustment to handlers.

(a) For milk received from producers at a pool plant located outside the State of Texas and that portion of the State of Oklahoma that is south of the northern boundaries of Beckham, Washita, Caddo, Canadian, Oklahoma, Pottawatomie, and Seminole Counties and west of the eastern boundaries of Seminole, Pontotoc, Johnston, and Marshall Counties, and 50 or more miles from the City Hall in Oklahoma City, by the shortest hard-surfaced highway distance as determined by the market administrator, and classified as Class I milk or assigned location adjustment credit pursuant to paragraph (b) of this section, and for other source milk to which a location adjustment is applicable, the prices specified in § 1106.51(a) shall be subject to a location adjustment credit computed as follows:

Distance from the City Hall in Oklahoma City (miles)	*Cents per hundredweight*
50 to 150	10
150.1 to 165	12
165.1 to 180	14
180.1 to 195	16
195.1 to 210	18
210.1 to 225	20
225.1 to 240	22

Plus 1 cent for each additional 15 miles or fraction thereof in excess of 240 miles; and

* * * * *

7. Section 1106.61 is revised to read as follows:

§ 1106.61 Plants subject to other Federal orders.

The provisions of this part shall not apply with respect to the operation of any plant specified in paragraph (a), (b), or (c) of this section except that the operator shall, with respect to total receipts of skim milk and butterfat at such plant, make reports to the market administrator at such time and in such manner as the market administrator may require and allow verification of such reports by the market administrator:

(a) A distributing plant meeting the requirements of § 1106.9 which also meets the pooling requirements of another Federal order and from which a greater quantity of Class I milk was disposed of during the month on routes in such other Federal order marketing area than was so disposed of in this marketing area, except that if such plant was subject to all the provisions of this part in the immediately preceding month, it shall continue to be subject to all the provisions of this part until the third consecutive month in which a greater proportion of its Class I disposition is made in such other marketing area unless, notwithstanding the provisions of this paragraph, it is regulated under such other order. On the basis of a written application made by the plant operator at least 15 days prior to the date for which a determination of the Secretary is to be effective, the Secretary may determine that the Class I dispositions in the respective marketing areas to be used for purposes of this paragraph shall exclude (for a specified period of time) Class I disposition made under limited term contracts to governmental bases and institutions.

(b) A distributing plant meeting the requirements of § 1106.9 which also meets the pooling requirements of another Federal order and from which a greater quantity of Class I milk was disposed of during the month on routes in this marketing area than was so disposed of in such other Federal order marketing area but which plant is nevertheless, fully regulated under such other Federal order;

(c) A supply plant meeting the requirements of § 1106.9 which also meets the pooling requirements of another Federal order and from which greater qualifying shipments are made during the month to plants regulated under such other order than are made to plants regulated under this part, except during the months of January through August if such plant retains automatic pooling status under this part; and

8. Section 1106.70(c) is revised to read as follows:

§ 1106.70 Computation of the net pool obligation of each pool handler.

* * * * *

(c) Add the amounts computed under subparagraphs (1) and (2) of this paragraph:

(1) Multiply the difference between the appropriate Class II milk price for the preceding month and the appropriate Class I milk price for the current month by the hundredweight of skim milk and butterfat subtracted from Class I milk pursuant to § 1106.46(a)(5) and the corresponding step of § 1106.46(b) for the current month; and

(2) Multiply the difference between the appropriate Class I milk price for the preceding month and the appropriate Class I milk price for the current month by the hundredweight of skim milk and butterfat subtracted from Class I milk pursuant to § 1106.46(a)(2-a) and the corresponding step of § 1106.46(b). If the Class I milk price for the current month is less than the Class I milk price for the preceding month, the result shall be a minus amount;

* * * * *

Amendments with respect to the adoption of a "base-excess" plan. 9. A new § 1106.19 is added to read as follows:

§ 1106.19 Base milk and excess milk.

(a) "Base milk" means milk received at a pool plant(s) from a producer during any of the months of the base-operating period which is not in excess of such producer's daily base computed pursuant to § 1106.67 multiplied by the number of days' production of such producer delivered in such month.

(b) "Excess milk" means milk received at a pool plant(s) from a producer during any of the months of the base-operating period which is in excess of the base milk of such producer for such months, and shall include all milk received during such months from a producer for whom no daily base can be computed pursuant to § 1106.67.

10. Section 1106.30(a) is revised to read as follows:

§ 1106.30 Reports of receipts and utilization.

* * * * *

(a) The quantities of skim milk and butterfat contained in milk received from producers, and for each month of the base-operating period the aggregate quantities of base milk and excess milk;

* * * * *

11. Section 1106.31(a) is revised to read as follows:

§ 1106.31 Reports of payments to producers.

* * * (a) The total pounds of milk received from each producer and cooperative association, the total pounds of butterfat contained in such milk, the number of days' production which was received from each producer and, for each month of the base-operating period, such producer's deliveries of base milk and excess milk; * * *

12. A new subhead and five new sections are added as follows:

DETERMINATION OF BASES

§ 1106.65 Base-operating period.

The base-operating period shall be the months of April through June of each year beginning with 1967.

§ 1106.66 Base-forming period.

The base-forming period shall be the months of September through December immediately preceding the base-operating period.

§ 1106.67 Determination of daily base.

Subject to the rules set forth in § 1106.68, the daily base of each producer shall be calculated by the market administrator as follows:

(a) Divide the total pounds of milk received by all handlers at pool plants from such producer during the base-forming period by the number of days' production delivered by such producer during such period or by 90, whichever is more; and

(b) In the case of a producer for whose account milk is received at a plant(s) pursuant to § 1106.68(a) (2) or (3) or any combination of such receipts at plants pursuant to § 1106.68(a) (1), (2), or (3), a daily base shall be calculated as if all such receipts had been received at a pool plant during the base-forming period and in the same manner as provided in paragraph (a) of this section.

§ 1106.68 Base rules.

The following rules shall apply in connection with the establishment of bases:

(a) A base shall be assigned to the producer for whose account milk is received during the base-forming period at:

(1) A pool plant;

(2) A plant that did not qualify as a pool plant during each or any month of the base-forming period but which quali-

fies as a pool plant during any of the months of the base-operating period; and

(3) An other order plant, if such person subsequently becomes a producer under this part; and

(b) Subject to subparagraphs (1) and (2) of this paragraph, an entire base may be transferred from a person holding such base to any other person. The transfer shall be effective for use the first day of the next succeeding base-operating month following the receipt by the market administrator of an application for such transfer. The application shall be on a form approved by the market administrator and shall be signed by the base-holder or his heirs and by the person to whom such base is to be transferred:

(1) If a base is held jointly, the entire base shall be transferable only upon receipt of such application signed by all joint holders or their heirs; and

(2) If a base is transferred to a producer already holding a base which was either earned by him or transferred to him, a new base shall be computed in the manner described in § 1106.67 except that for the purpose of this computation the producer milk delivered on the respective number of days' production during the base-forming period by each of the persons in whose name such bases were earned shall be considered to have been delivered on the same respective days by the producer for whom the new base is being computed.

§ 1106.69 Announcement of established bases.

On or before March 25 of each year, the market administrator shall notify each producer and the handler receiving milk from such producer of the daily base established by the producer.

13. Section 1106.72 is revised to read as follows:

§ 1106.72 Computation of weighted average and uniform prices.

For each month, the market administrator shall make the following computations:

(a) Divide the aggregate value computed pursuant to § 1106.71 by the sum of the following for all handlers included in these computations:

(1) The total hundredweight of producer milk; and

(2) The total hundredweight for which a value is computed pursuant to § 1106.70(e); and

(b) Subtract not less than 4 cents nor more than 5 cents per hundredweight. The result shall be known as the "weighted average price" and also shall be the uniform price per hundredweight for milk of 3.5 percent butterfat content received from producers for all months except those of the base-operating period.

14. A new § 1106.73 is added to read as follows:

§ 1106.73 Computation of uniform base and excess prices.

For each of the months in the base-operating period, the market administrator shall compute uniform prices per hundredweight for base milk and for excess milk, each of 3.5 percent butterfat content as follows:

(a) Compute the total value of excess milk for all handlers who submit reports pursuant to § 1106.30 and who have made the payments pursuant to §§ 1106.80 and 1106.84 for the preceding month as follows:

(1) Multiply the hundredweight of such milk not in excess of the total quantity of producer milk assigned to Class II milk in the pool plants of such handlers by the Class II price;

(2) Multiply any additional hundredweight of excess milk not included in subparagraph (1) of this paragraph by the Class I milk price; and

(3) Add together the resulting amounts;

(b) Divide the total value of excess milk obtained in paragraph (a) of this section by the total hundredweight of such milk and adjust to the nearest cent. The resulting figure shall be the uniform price for excess milk of 3.5 percent butterfat received from producers;

(c) Subtract from the amount resulting from the computation pursuant to § 1106.71 an amount computed by multiplying the hundredweight of milk specified in § 1106.72(a)(2) by the weighted average price, then subtract the total value of excess milk obtained in paragraph (a) of this section and adjust by any amount involved in rounding the uniform price for excess milk to the nearest cent;

(d) Divide the amount obtained in paragraph (c) of this section by the total hundredweight of base milk included in these computations; and

(e) Subtract not less than 4 cents nor more than 5 cents from the amount computed pursuant to paragraph (d) of this section. The resulting figure shall be the uniform price for base milk of 3.5 percent butterfat received from producers.

15. Section 1106.81 is revised to read as follows:

§ 1106.81 Location differentials to producers and on nonpool milk.

(a) The applicable uniform and uniform base prices for each month for producer milk received at a pool plant shall be reduced according to the location of the pool plant, at the rates set forth in § 1106.53; and

(b) For purposes of computations pursuant to §§ 1106.84 and 1106.85 the weighted average price shall be adjusted at the rates set forth in § 1106.53, applicable at the location of the nonpool plant from which the milk was received.

16. Section 1106.84(b)(2) is revised to read as follows:

§ 1106.84 Payments to the producer-settlement fund.

* * * * *

(b) * * *

(2) The value at the weighted average price(s) applicable at the location of the plant(s) from which received (not to be less than the value at the Class II price applicable to milk used in the manufacture of American cheese, butter, and nonfat dry milk) with respect to other source milk for which a value is computed pursuant to § 1106.70(e).

Signed at Washington, D.C., on December 20, 1965.

CLARENCE H. GIRARD,
Deputy Administrator,
Regulatory Programs.

[F.R. Doc. 65-13712; Filed, Dec. 22, 1965; 8:47 a.m.]

SMALL BUSINESS ADMINISTRATION

[13 CFR Part 107]

SMALL BUSINESS INVESTMENT COMPANIES

Notice of Proposed Rule Making

Notice is hereby given that pursuant to authority contained in section 308 of the Small Business Investment Act of 1958, Public Law 85-699, 72 Stat. 694, as amended, it is proposed to amend, as set forth below, Part 107 of Subchapter B, Chapter I, of Title 13 of the Code of Federal Regulations, as revised in 29 F.R. 16946-16961, and amended in 30 F.R. 534, 1187, 2652, 2653, 2654, 3635, 3856, 7597, 7651, 8775, 8900, 11960, 13005, 14095, and 14850, by amending § 107.802. Prior to final adoption of such amendment, consideration will be given to any comments or suggestions pertaining thereto which are submitted in writing, in triplicate, to the Investment Division, Small Business Administration, Washington, D.C., 20416, within a period of thirty (30) days of the date of this notice in the FEDERAL REGISTER.

Information. Existing provisions of § 107.802 require, among other things, the submission of financial reports of Licensees to SBA at regular intervals, and the submission of such other reports at such times and in such form as SBA shall require.

SBA has now determined that it is necessary to obtain information on small business concerns financed by Licensees. This will assist it in evaluating the progress of the SBIC industry in accomplishing the objectives of the Act. As set forth below, it is proposed that Licensees shall submit the required data, annually, on SBA Form 684, Program Evaluation Report. The Report and accompanying Instructions for its preparation are published herewith along with the proposed amendment of § 107.802.

1. It is proposed to amend the Regulations Governing Small Business Investment Companies by adding a new paragraph (h-1) to § 107.802, which would read as follows:

§ 107.802 Records and reports.

* * * * *

(h-1) *Program Evaluation Reports.* The Program Evaluation Report, SBA Form 684, shall be prepared by each Licensee as of the last day of every calendar year, to reflect all transactions involving such Licensee's debt or equity financing of small business concerns, which were outstanding at any time during such calendar year: *Provided, however*, That the initial report as of December 31, 1965, shall reflect only financings of small business concerns which are outstanding as of December 31, 1965. The report shall be prepared in accordance with the accompanying instructions thereto, and shall be filed with SBA on or before March 31 of the ensuing year.

2. SBA Form 684, Program Evaluation Report, together with accompanying Instructions for the preparation of such Report, are also published herewith.

SBA Form 684
(12-65)

SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416
PROGRAM EVALUATION REPORT

Approved by Bureau of Budget
No. ....
Pages ...... of Pages ......

License No.
Employer identification No.

Name of licensee
City
County
State
ZIP Code

	SBC	This column for SBA use only	SBC	This column for SBA use only	SBC	This column for SBA use only	SBC	This column for SBA use only
1. Employer identification No........								
2. Name of small business concern.....								
3. Address:								
City........................								
County........................								
State........................								
4. Date business established...........								
5. Form of business........................								
6. Type (SIC 4-digit code)...........								

INVESTMENT INFORMATION

7. Type of investment and financing No......................								
8. Put-call features (yes or no).........								
9. Interest rate........................								
10. Initial disbursement date...........								
11. Maturity (months).....................								
12. Total funds disbursed..................								
13. Unpaid balance at Dec. 31, 1965...								
14. Use of proceeds (code)...............								
15. Secured (yes or no).....................								
16. Status of financing (code)............								

PREFINANCING INFORMATION

17. Fiscal year ended immediately prior to financing (date)...........								
18. Number of employees.................								
19. Gross revenue for the year..........								
20. Profit or (loss) for the year..........								
21. Assets:								
Current........................								
Total........................								
22. Liabilities:								
Current........................								
Total........................								
23. Net worth (deficit).....................								
24. Inventories........................								
25. Receivables........................								
26. Borrowings:								
Short-term........................								
Long-term........................								

CURRENT INFORMATION

27. Fiscal year ended in 1965 (date)....								
28. Number of employees.................								
29. Gross revenue for the year..........								
30. Profit or (loss) for the year..........								
31. Assets:								
Current........................								
Total........................								
32. Liabilities:								
Current........................								
Total........................								
33. Net worth (deficit).....................								
34. Inventories........................								
35. Receivables........................								
36. Borrowings:								
Short-term........................								
Long-term........................								
37. SBC discontinuances (code).......								

VERIFICATION

The information contained above is certified to be complete and correct to the best of my knowledge and belief.

Date .... Signature ....

Title ....

INSTRUCTIONS FOR PREPARATION OF THE PROGRAM EVALUATION REPORT, SBA FORM 684

Section 107.802(i) of the Regulations governing small business investment companies includes a provision requiring each Licensee to submit a Program Evaluation Report, SBA Form 684, as of December 31 of each year. The report is required to be submitted to the Small Business Administration on or before March 31 of the following year.

Each such report as of December 31, 1965, will reflect all licensee financings of small business concerns which are outstanding at December 31, 1965.

Separate entries on lines 1 through 16 are required for each financing. For example, two or more loans to the same small business concern should be entered in separate columns. Multiple disbursements to a small business concern under a single financing instrument are to be treated as a single financing, and only one entry should be made to include all such disbursements to the small business concern.

If the licensee reports more than one financing of the same small business concern, it should complete lines 3 through 6, and 17 through 37 for the first such financing only, and leave these lines blank in the columns used to report other financings of the same small business concern.

It is expected that future reports will require entries comparable to those on lines 3 through 12 and lines 14 through 26 for financings previously reported only when there has been a change in the financing or in the small business concern which requires a revision of previous entries.

Instructions covering each line of the report are as follows:

A. Entries to be made on each page of the report:

1. Page number, and total number of pages in the report. (Examples: page 1 of 4 pages or page 3 of 6 pages.)

2. SBIC license number.

3. Employer identification number. Enter the number assigned to the licensee by the U.S. Treasury Department. If the licensee does not have an employer identification number, it should obtain one by submitting an Application for Employer Identification Number, Form SS-4, to the U.S. Director of Internal Revenue with whom the licensee's Federal tax and employee withholding returns are filed.

4. Name of licensee.

5. City, county, and State, in which Licensee's principal office is located, and ZIP code for licensee's principal office.

B. Entries to be made for each financing outstanding at December 31, 1965. (NOTE: Multiple disbursements on a single financing instrument should be combined and treated as a single financing on this report.)

Item No.

1. *Employer identification number* of the small business concern financed. The small business concern should have an employer identification number or should obtain one by filing Form SS-4 with the U.S. Director of Internal Revenue with whom its Federal tax and employee withholding returns are filed.
2. *Name of small business concern* financed.
3. *Address.* Enter the address of small business concern financed, including city, county, and state in which the concern's principal business office is located.
4. *Date business established.* Enter the month and year that the small business concern commenced business in its present form.
5. *Form of business.* Show whether the financed concern is a corporation, partnership, proprietorship, etc.

No. 247——23

6. *Type (SIC 4-Digit Code).* Enter the 4-digit Standard Industrial Classification Code of the principal industry in which the small business concern is engaged. Determine the proper code by reference to the Standard Industrial Classification Manual, issued by the Executive Office of the President, Bureau of the Budget.

7. *Type of investment and financing number.* Types of investment include loans, debt security, capital stock, and stock rights (including warrants or options). If the licensee has had more than one financing of the same type outstanding with the same small business concern, Items 1 through 16 should be completed for each of these financings in separate columns of the form. Each such similar financing should be assigned a financing number for purposes of identification, and this financing number should be shown on future reports relating to the same financing. Typical entries on this line would be: Loan-1, loan-2, debt security, etc. (If there has been only one financing of a given type for the small business concern, no financing number need be assigned.)

8. Put and call features (yes or no). Indicate whether or not the financing agreement includes put and call features as described in section 107.504 of the regulations by entering "yes" or "no," as applicable.

9. *Interest rate.* Enter the stated interest rate for each loan or debt security investment, as shown on the financing instrument. Enter "N/A" (not applicable) for investments in capital stock and stock rights.

10. Enter the date of the first disbursement applicable to the specific financing made to the small business concern.

11. *Maturity (months).* Enter the number of months from the initial disbursement date to maturity for each loan or debt security financing. Enter "N/A" for investments in capital stock and stock rights.

12. *Total funds disbursed.* Show the total funds disbursed to the small business concern applicable to each specific financing. If multiple disbursements have been made under a single financing agreement, show the total amount of such disbursements as a single amount.

13. *Unpaid balance at December 31, 1965.* Enter the principal amount of the unpaid balance of the loan or debt security financing or the cost of the capital stock or stock rights investment, as of December 31, 1965.

14. *Use of proceeds (code).* Enter the code number indicating which of the following was the primary purpose of the small busines concern in obtaining the financing (enter only one code number for each financing):

(a) Operating capital (Code No. 1).
(b) Plant modernization (Code No. 2).
(c) Acquisition of all or part of an existing business (Code No. 3).
(d) Consolidation of obligations, debt refunding, etc. (Code No. 4).
(e) New building or plant construction (Code No. 5).
(f) Acquisition of machinery and equipment (Code No. 6).
(g) Land acquisition (Code No. 7).
(h) Other (Code No. 8).

If the proceeds were used primarily to improve the financed concern's marketing activities, enter the appropriate code number, followed by the letter "M." If proceeds were used primarily for research and development activities, enter the appropriate code number followed by the letter "R." If neither marketing nor research and development was the primary overall purpose, enter only the appropriate code number, with no following letter.

15. *Secured (yes or no).* Indicate by the word "yes" or "no" whether the financing is fully secured by collateral or guaranty.

16. *Status of financing (code).* Enter the appropriate code number to indicate the current status of the financing:

(a) Good—repayment or other investment recovery of the full amount of principal and interest or cost of other investment appears to be reasonably assured (Code No. 1).
(b) Fair—repayment or other investment recovery of the full amount of principal and interest or cost of other investment is possible, but not assured pending improvement in the performance of the small business concern financed (Code No. 2).
(c) Poor—repayment or other investment recovery is in jeopardy and some loss is probable (Code No. 3).
(d) The financing has been paid off in full by the financed small business concern or has been disposed of otherwise at cost or at a profit to the licensee (Code No. 4).
(e) Financing has been liquidated through sale, partial repayment and writeoff, or foreclosure and Licensee has either absorbed a loss on the financing or may absorb a loss in the future when collateral is liquidated (Code No. 5).
(f) The financing instrument was exchanged for another financing instrument of the same small business concern, prior to the reporting date (Code No. 6). NOTE: The new financing instrument should be reflected in entries in another column of the same report.
(g) The financing instrument was exchanged through merger, etc., for a financing instrument of a different business concern, prior to the report date (Code No. 7). NOTE: The new financing instrument, if considered to be financing of an eligible small business concern, should be reflected in entries in another column of the same report.

C. Entries to be made for each small business concern financed: NOTE: Complete Items 17 through 37 only once for each small business concern financed; leave these items blank in the columns used to describe other financings of the same small business concern.

Item No.

17 and 27. *Fiscal year ended immediately prior to financing (date) and fiscal year ended in 1965 (date).* Enter the date of the close of the financed concern's latest fiscal year which ended prior to the initial date of disbursement of funds related to the financing (Item 17) and the date of the close of the financed concern's fiscal year which ended in 1965 (Item 27).

18 and 28. *Number of employees.* Enter the financed small business concern's number of employees at the close of the fiscal years ended on the dates shown in Items 17 and 27, respectively.

19 and 29. *Gross revenue for the year.* Enter the amount of total sales or other gross revenues of the financed small business concern for the fiscal years ended on the dates shown in Items 17 and 27, respectively.

20 and 30. *Profit or (loss) for the year.* Enter the amounts of net profit or (loss), before taxes, of the financed small business concern for the fiscal years ended on the dates shown in Items 17 27, and respectively. In determining profit or (loss) for the year, exclude any tax loss carryovers from previous years.

21 and 31. *Assets: Current.* Enter the total amounts of all assets held by the financed small business concern on the dates shown in Items 17 and 27, respectively, which could be expected under normal circumstances to be realized in cash or its equivalent within a period of 1 year from such dates.

21 and 31. *Assets: Total.* Enter the total amounts of all assets including current assets, but net of valuation reserves, held by the financed small business concern as of the dates shown in Items 17 and 27, respectively.

22 and 32. *Liabilities: Current.* Enter the total amounts of all liabilities of the financed small business concern as of the date shown in Items 17 and 27, respectively, which were due and payable within 1 year of such dates.

22 and 32. *Liabilities: Total.* Enter the total amounts of all liabilities, including current liabilities, of the financed small business concern as of the dates shown in Items 17 and 27, respectively.

23 and 33. *Net worth (deficit).* Enter the amount of the net worth or (deficit) of the financed small business concern as of the dates shown in Items 17 and 27, respectively.

24 and 34. *Inventories.* Enter the total amount of the inventories of the financed small business concern as of the dates shown in Items 17 and 27, respectively. This entry should include raw materials and supplies, goods in process of manufacture, finished products and merchandise on hand, and other tangible goods that are sold in the normal course of operations.

25 and 35. *Receivables.* Enter the total amount of the receivables of the financed small business concern as of the dates shown in Items 17 and 27, respectively. These receivables should include all trade receivables such as trade acceptances, notes receivable, and accounts receivable arising from the sale of goods or services.

26 and 36. *Borrowings: Short-term.* Enter the amount of the portion of the financed small business concern's outstanding borrowings which were due within 1 year from the dates shown in Items 17 and 27, respectively. This entry should cover fund borrowings of all types, such as bank loans, mortgages, and amounts borrowed from SBIC's., etc.

26 and 36. *Borrowings: Long-term.* Enter the amount of the portion of the financed small business concern's outstanding borrowings which were due after 1 year from the dates shown in Items 17 and 27, respectively. This entry should cover fund borrowings of all types, such as bank loans, mortgages, and amounts borrowed from SBIC's., etc.

37. *SBC discontinuances (code)*. If the financed small business concern has discontinued business during the period covered by the report, enter the code number designating the reason for its discontinuance. If the concern has not discontinued business, enter "N/A" (not applicable). Enter only one code, or "N/A," for each financing.

Discontinuance codes are:

(a) Insolvency and/or bankruptcy (Code No. 1).

(b) Merger with, or sale to, another business concern (code No. 2).

(c) Voluntary liquidation, for reasons such as retirement of the concern's principal (Code No. 3).

(d) Involuntary liquidation, for reasons other than insolvency, such as fire, death of a principal, condemnation of business location (Code No. 4).

(e) Other causes (Code No. 5).

D. Verification.

1. The chief financial officer of the Licensee should sign the verification section on the last page of the report. The date on which the report is signed and the title of the signer should be entered in the spaces provided.

Dated: December 20, 1965.

ROSS D. DAVIS,
Executive Administrator.

[F.R. Doc. 13726; Filed, Dec. 22, 1965; 8:48 a.m.]

Notices

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

CALIFORNIA

Notice of Filing of Protraction Diagram; Correction

DECEMBER 14, 1965.

F.R. Doc. 65-12894, appearing at page 14936 of the issue of Thursday, December 2, 1965, should read as follows:

Notice is hereby given that effective January 25, 1966, the following protraction diagram, approved June 18, 1965, is officially filed of record in the Sacramento, Calif., Land Office. In accordance with Title 43, Code of Federal Regulations, this protraction will become the basic record for describing the land for all authorized purposes at and after 10 a.m. of the above effective date. Until this date and time, the diagram has been placed in the open files and is available to the public for information only.

CALIFORNIA PROTRACTION DIAGRAM

HUMBOLDT MERIDIAN

T. 3 S., R. 1 W.
  Sec. 21, excluding NW¼;
  Secs. 22 and 23;
  Sec. 24, excluding NE¼;
  Secs. 25, 26 and 27;
  Sec. 28, excluding SW¼;
  Sec. 33, excluding NW¼;
  Secs. 34, 35 and 36.

JOHN E. CLUTE,
Chief,
Branch of Title and Records.

[F.R. Doc. 65-13681; Filed, Dec. 22, 1965; 8:45 a.m.]

[Oregon 016850 (Wash.)]

WASHINGTON

Notice of Proposed Withdrawal and Reservation of Land

DECEMBER 9, 1965.

The Corps of Engineers, U.S. Department of the Army, has filed an application, Serial Number Oregon 016850 (Wash.), for the withdrawal of the lands described below, from all forms of appropriation under the public land laws, including the mining laws (Chap. 2, 30 U.S.C.) and mineral leasing laws.

The applicant desires to use the land for project planning and the construction of a dam to provide power, flood control, and navigation facilities on the Snake River and for other purposes in connection with the Little Goose Lock and Dam Project.

For a period of 30 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the undersigned officer of the Bureau of Land Management, Department of the Interior, 710 Northeast Holladay, Portland, Oreg., 97232.

The authorized officer of the Bureau of Land Management will undertake such investigations as are necessary to determine the existing and potential demand for the lands and their resources. He will also undertake negotiations with the applicant agency with the view of adjusting the application to reduce the area to the minimum essential to meet the applicant's needs, to provide for the maximum concurrent utilization of the lands for purposes more essential than the applicant's, and to reach agreement on the concurrent management of the lands and their resources.

He will also prepare a report for consideration by the Secretary of the Interior who will determine whether or not the lands will be withdrawn as requested by the Corps of Engineers.

The determination of the Secretary on the application will be published in the FEDERAL REGISTER. A separate notice will be sent to each interested party of record.

If circumstances warrant it, a public hearing will be held at a convenient time and place which will be announced.

The lands involved in the application are:

WASHINGTON

WILLAMETTE MERIDIAN

T. 13 N., R. 38 E.,
  Sec. 24, lots 1, 2, and S½S½N½SW¼ containing 83.15 acres;
  Unsurveyed island (Little Goose Island) lying opposite secs. 25 and 26 containing 12.90 acres.
T. 13 N., R. 39 E.,
  Unsurveyed island (Goose Island) lying opposite secs. 27 and 28 containing 30.30 acres;
  Unsurveyed island lying opposite sec. 27 containing 5.80 acres;
  Sec. 28, NE¼NE¼ containing 0.31 of an acre.
T. 13 N., R. 40 E.,
  Unsurveyed island lying opposite sec. 7 containing 3.85 acres.
T. 14 N., R. 40 E.,
  Unsurveyed island (Willow Island) lying opposite secs. 23 and 24 containing 14.12 acres.
T. 14 N., R. 41 E.,
  Unsurveyed island lying opposite sec. 17 containing 17.45 acres;
  Sec. 26, lot 2 containing 22.50 acres.
T. 14 N., R. 42 E.,
  Unsurveyed island lying opposite sec. 22 containing 5.05 acres;
  Unsurveyed island (Pine Tree Island) lying opposite secs. 22 and 23 containing 32.80 acres;
  Unsurveyed islands lying opposite sec. 23 containing 0.75 and 8.26 acres;
  Unsurveyed island (Atwoods Island) lying opposite sec. 30 containing 2.30 acres;
  Unsurveyed island lying opposite sec. 13 containing 20.10 acres.
T. 14 N., R. 43 E.,
  Unsurveyed island lying opposite secs. 18 and 19 containing 12.63 acres;
  Sec. 32, lots 3, containing 39.95 acres, and 5, containing 7.20 acres;
  Unsurveyed island lying opposite sec. 32 containing 6.94 acres;
  Unsurveyed island lying opposite secs. 32 and 33, containing 18.88 acres;
  Unsurveyed island lying opposite sec. 33 containing 8.72 acres.

The areas described aggregate 353.96 acres.

D. B. LEIGHTNER,
Acting Land Office Manager.

[F.R. Doc. 65-13682; Filed, Dec. 22, 1965; 8:45 a.m.]

[Utah 0147522]

UTAH

Notice of Proposed Withdrawal and Reservation of Lands

NOVEMBER 29, 1965.

The Forest Service, U.S. Department of Agriculture has filed application for the withdrawal of the lands described below from all forms of appropriation and entry under the public land laws including the mining laws but not the mineral leasing laws, subject to existing valid rights.

The applicant desires the land as an addition to the Wasatch Fire Control Center in Salt Lake City, Utah.

For a period of 30 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the undersigned officer of the Bureau of Land Management, Department of the Interior, Post Office Box 11505, Salt Lake City, Utah, 84111.

If circumstances warrant, a public hearing will be held at a convenient time and place, which will be announced.

The determination of the Secretary on the application will be published in the FEDERAL REGISTER. A separate notice will be sent to each interested party of record.

The tract involved in the application is 300 feet long by 230 feet wide and is described by metes and bounds as follows:

Beginning at a point which bears south 42°15'30'' east, 9160.378 feet, and south 89°59'50'' west, 3974.283 feet from the northwest corner of Section 4, T. 1 S., R. 1 E., SLM; said point of beginning being also north 89°59'50'', east 700 feet from a U.S. Military Monument No. 3, a conical monument with a 2½-inch brass disc set in the top as shown on a map entitled "Survey of Western Boundary of U.S. Military Reservation, Fort Douglas, Utah," and which is on file in the Post Engineer's Office, Fort Douglas, Utah; thence running from said point north 00°02'01'' west, 1100 feet and then north 89°59'50" east, 400 feet to the true point of beginning.

Thence north 89°59'50" east, 230 feet; thence south 00°2'01" east, 300 feet; thence south 89°59'50" west, 230 feet; thence north 00°02'01" west, 300 feet to the point of beginning, containing 1.584 acres.

R. D. Nielson,
State Director.

[F.R. Doc. 65-13689; Filed, Dec. 22, 1965; 8:45 a.m.]

[Sacramento 080021]

CALIFORNIA

Notice of Proposed Withdrawal and Reservation of Lands, and Partial Termination Thereof

December 15, 1965.

The Forest Service, U.S. Department of Agriculture, has filed an application, Serial Number Sacramento 080021, for the withdrawal of the lands described below, from prospecting, location, entry and purchase under the general mining laws, subject to existing valid claims.

The applicant desires the lands for roadside scenic area zone purposes.

For a period of 30 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the undersigned officer of the Bureau of Land Management, U.S. Department of the Interior, Room 4201, U.S. Courthouse and Federal Building, Sacramento, Calif., 95814.

The Department's regulations (43 CFR 2311.1-3(c)), provide that the authorized officer of the Bureau of Land Management will undertake such investigations as are necessary to determine the existing and potential demand for the lands and their resources. He will also undertake negotiations with the applicant agency with the view of adjusting the application to reduce the area to the minimum essential to meet the applicant's needs, to provide for the maximum concurrent utilization of the lands for purposes other than the applicant's, and to reach agreement on the concurrent management of the lands and their resources.

The authorized officer will also prepare a report for consideration by the Secretary of the Interior who will determine whether or not the lands will be withdrawn as requested by the applicant agency.

The determination of the Secretary on the application will be published in the Federal Register. A separate notice will be sent to each interested party of record.

If circumstances warrant, a public hearing will be held at a convenient time and place, which will be announced.

The lands involved in the application are:

Mount Diablo Meridian

Sierra National Forest

Roadside Zone along the Yosemite Highway, California State Highway 41

A strip of land 200 feet on each side of the centerline of the Yosemite Highway through the following legal subdivisions:

T. 5 S., R. 21 E.
Sec. 13, Lots 6, and 7;
Sec. 35, SW¼SW¼.
T. 6 S., R. 21 E.
Sec. 2, Lot 4, and SE¼NW¼;
Sec. 3, Lot 1;
Sec. 13, S½SW¼;
Sec. 23, E½SE¼.

Roadside Zone along the Forest Highway No. 74

A strip of land 200 feet on each side of the centerline of the Forest Highway 74 through the following legal subdivisions:

T. 7 S., R. 22 E.
Sec. 5, Lot 9;
Sec. 8, NW¼NE¼;
Sec. 9, S½SE¼NW¼, NE¼SW¼, NW¼SE¼, E½SW¼SE¼, W½SE¼SE¼, and SE¼SE¼SE¼;
Sec. 10, SW¼SW¼SW¼;
Sec. 14, W½W½, S½SE¼SW¼, and SW¼SW¼SE¼;
Sec. 15, S½NE¼NE¼, SE¼NE¼, W½NW¼, and SE¼NW¼;
Sec. 16, NE¼NE¼;
Sec. 23, S½NE¼ and E½SE¼;
Sec. 24, SW¼NW¼SW¼ and W½SW¼SW¼;
Sec. 25, NW¼NW¼ and E½SW¼;
Sec. 36, W½E½ and NE¼NE¼NW¼.
T. 8 S., R. 22 E.
Sec. 1, Lot 2, and E½SW¼NE¼.
T. 8 S., R. 23 E.
Sec. 6, S½ of Lot 6, and Lot 7;
Sec. 7, Lot 8;
Sec. 18, Lot 2, NE¼SW¼ and W½SE¼SW¼.

Roadside Zone along the Mammoth Road

A strip of land 200 feet on each side of the centerline of the Mammoth Road through the following legal subdivisions:

T. 8 S., R. 23 E.
Sec. 25, S½NW¼NE¼;
Sec. 33, E½NW¼SE¼;
Sec. 36, W½SW¼NW¼ and NW¼SW¼.
T. 9 S., R. 23 E.
Sec. 2, Lot 4;
Sec. 3, SE¼NE¼.
T. 6 S., R. 24 E.
Sec. 1, Lot 11, and N½NE¼SE¼;
Sec. 3, SE¼SE¼;
Sec. 9, SE¼NE¼;
Sec. 10, S½NE¼, SW¼NW¼, N½SW¼, and NW¼SE¼;
Sec. 11, N½N½;
Sec. 16, SE¼SE¼;
Sec. 29, SW¼NW¼;
Sec. 30, NE¼NE¼ and W½W½SE¼;
Sec. 31, W½NE¼, W½NE¼SE¼, NW¼SE¼, and SE¼SE¼.
T. 7 S., R. 24 E.
Sec. 5, SW¼NW¼SW¼ and SE¼SW¼;
Sec. 8, W½NE¼NE¼, NW¼NE¼, and W½E½SE¼;
Sec. 16, SE¼NW¼;
Sec. 17, NE¼NE¼;
Sec. 20, SE¼;
Sec. 21, N½NE¼, SW¼NE¼, NW¼SW¼, and NE¼SE¼ partly unsurveyed;
Sec. 33, W½NE¼ and NE¼SW¼.
T. 8 S., R. 24 E.
Sec. 4, Lot 4 and SE¼SW¼;
Sec. 9, SW¼NW¼;
Sec. 17, NE¼SE¼;
Sec. 19, Lot 4, and SE¼SW¼;
Sec. 20, SW¼SW¼;
Sec. 21, SE¼NW¼ and NE¼SE¼.
T. 5 S., R. 25 E.
Sec. 19, E½SE¼ and SW¼SE¼;
Sec. 30, NE¼NE¼, W½NE¼, SE¼NW¼, and E½SW¼.

The areas described above aggregate approximately 1800 acres.

The applicant agency has cancelled its application insofar as it involved the lands described below. Therefore, pursuant to the regulations contained in 43 CFR 2311.1-2(b) such lands will be at 10:00 a.m., on January 19, 1966, relieved of the segregative effect of the abovementioned application.

The lands terminated are:

Mount Diablo Meridian

Sierra National Forest

Roadside Zone along the Mammoth Road

A strip of land 200 feet on each side of the centerline of the Mammoth Road through the following legal subdivisions:

T. 6 S., R. 24 E.
Sec. 30, NW¼NE¼.
T. 7 S., R. 24 E.
Sec. 29, N½NE¼ and SE¼NE¼.

Roadside Zone along the Forest Highway No. 74

A strip of land 200 feet on each side of the centerline of the Forest Highway 74 through the following legal subdivisions:

T. 7 S., R. 22 E.
Sec. 9, NE¼SE¼ and NE¼SE¼SE¼.
T. 8 S., R. 23 E.
Sec. 18, E½SE¼SW¼.

Roadside Zone along the Yosemite Highway, California State Highway 41

A strip of land 200 feet on each side of the centerline of the Yosemite Highway through the following legal subdivisions:

T. 5 S., R. 21 E.
Sec. 24, NW¼SW¼.

The area described above aggregates approximately 116 acres.

R. J. Litten,
Chief, Lands Adjudication Section,
Sacramento Land Office.

[F.R. Doc. 65-13690; Filed, Dec. 22, 1965; 8:45 a.m.]

DEPARTMENT OF AGRICULTURE

Agricultural Research Service

[P.P.C. 641]

BLACK STEM RUST

Notice of Specifically Approved Establishments Eligible To Ship Rust-Resistant Berberis, Mahoberberis, and Mahonia Interstate

Pursuant to § 301.38-6(a) (2) and (3) of the regulations supplemental to the black stem rust quarantine (Notice of quarantine No. 38, 7 CFR 301.38), under sections 8 and 9 of the Plant Quarantine Act of 1912, as amended, and section 106 of the Federal Plant Pest Act (7 U.S.C. 161, 162, 150ee), notice is hereby given that the following nurseries and dealers have fulfilled the requirements of the said § 301.38-6(a) (2) and (3) and are specifically authorized to ship the rust-resistant plants designated in § 301.38-5a in accordance with the regulations in 7 CFR Part 301, Subpart—Black Stem Rust:

Establishment or Dealer, Address

Alabama

Abbot's Nursery, Route 4, Box 550, Mobile.
Athens Nursery Company, Box 107, Athens.

James A. Bateman (Exotica Nursery), Box 163, Theodore.
Bradford's Blue Spring Nursery, Route 2, Box 548, Huntsville.
Byers Nursery Company, Huntsville.
Chase Nursery Company, Chase.
Cottage Hill Nursery, 4000 Japonica Lane, Mobile.
Crossville Nurseries, Box 127, Crossville.
Tom Dodd Nurseries, Inc., Semmes.
Eva Nurseries, Post Office Box 65, Eva.
Flowerwood Nursery, Inc., Route 1, Box 130, Mobile.
Fraser Nurseries, Inc., 630 Montevallo Road SW., Birmingham.
Grimes Nursery, Semmes.
Guthrie-Barton Nursery, Inc., Route 2, Box 42-A, Tuscaloosa.
Huntsville Wholesale Nursery, Inc., Box 888, Huntsville.
Joppa Nursery Company, Joppa.
King's Nursery, Auburn.
Loop Nursery, 2406 Grant, Mobile.
Monroe Nurseries, Inc., Crossville.
Naugher Nursery, Inc., Chase.
Overlook Nurseries, Inc., 4125 Overlook Grove, Mobile.
Harry A. Partridge Nursery, 1955 Springhill Avenue, Mobile.
Semmes Nurseries, Inc., Semmes.
Silver Bay Nurseries, Route 1, Daphne.
Strain and Son Nursery, Highway 31 South, Athens.
Tallapoosa County Nursery, R.F.D. 1, Dadeville.
Webb Nursery and Landscape Co., 4501 Blue Springs Highway N.W., Huntsville.

ARKANSAS

Piggott Nursery Company, Piggott.

CALIFORNIA

Armstrong Nurseries, Inc., 1265 South Palmetto Street, Ontario.
Bee Line Nursery, 1160 North Amelia, San Dimas.
Bordier's Nursery, Inc., 5659 North Bonnie Cove, Glendora.
Bordier's Nursery, Inc., 7231 Irvine Boulevard, Post Office Box 21, Irvine.
Carpinteria Nursery, 3798 North Via Real, Carpinteria.
Christensen Nursery Company, 935 Old County Road, Belmont.
J. Clarke Nursery Company, Post Office Box 343, San Jose 3.
Coast Wholesale Nursery, 5006 North Bartlett Avenue, San Gabriel.
Leonard Coates Nurseries, Inc., Post Office Box 231, San Jose 3.
Deigaard Nurseries, Inc., Post Office Box 582, Monrovia.
Descanso Nurseries, 12492 Pipeline Avenue, Chino.
Descanso Nurseries, Benson Lane, Fort Bragg.
Edenvale Nursery, Inc., 40160 Mission Boulevard, Fremont.
Hemet Wholesale, Post Office Box 37, Hemet.
Hines Nurseries, 301 North San Gabriel Boulevard, San Gabriel.
Hines Wholesale Nurseries, 12621 Jeffrey Road, Santa Ana.
Hubbard Wholesale Growers, Inc., Post Office Box 116, Duarte.
J & J Nursery, 13521 South Crenshaw, Hawthorne.
K. M. Nursery, Inc., 14029 South Normandie Avenue, Gardena.
K. M. Nursery, Inc., 5154 Foothill Road, Carpinteria.
Mayflower Nurseries, Inc., 16908 South Normandie Avenue, Gardena.
L. B. Merrick Nurseries, 9531 East Whittier Boulevard, Pico Rivera.
Monrovia Nursery Co., 18331 Foothill Boulevard, Azusa.
Nelson Nursery, 32151 Alvarado Boulevard, Union City.
F. L. Norman's Nursery, 3343 Del Mar Boulevard, Pasadena.
Frank H. Ogawa, Inc. (dealer), 2221 73d Avenue, Oakland.
Oki Nursery, Inc., Post Office Box 7118, Perkins Br., Sacramento.
Olle Olsson Nursery, Inc., 2154 Peck Road, Monrovia.
Pomona Wholesale Nursery, 1480 East Fifth Street, Pomona.
Ponto Nursery, Inc., 2545 Ramona Drive, Vista.
San Gabriel Nursery & Florist, Inc., 632 South San Gabriel Boulevard, San Gabriel.
Select Nurseries, Inc., 12831 East Central Avenue, Brea.
Skylark Nursery, 6735 Sonoma Highway, Santa Rosa.
Stribling's Nurseries, Inc., Post Office Box 793, Merced.
Sunnyside Nursery, 1650 West El Segundo Boulevard, Gardena.
Ben Taketomo Nursery, 14417 South Budlong Avenue, Gardena.
Tom's Nursery, Inc., 13021 Doty Avenue, Hawthorne.
Twin Pines Nursery, 2707 West Olive Avenue, Fresno.
Wesco Tropicals, Route 4, Box 409N, Escondido.
The White Flower Nursery Co., Inc., 1535 West 120th Street, Los Angeles 47.

COLORADO

Alameda Nursery, 3160 South Zuni Street, Englewood.
Fort Morgan Nursery, West Platte Avenue, Fort Morgan.
Iliff Garden Nursery, 4750 East Iliff, Denver.
Virgil Johnson Wholesale Nursery (dealer), 4400 Wynkoop, Denver.
Kroh Bros. Nurseries, Box 536, Loveland.
Marshall Nurseries, 5825 West 16th Avenue, Denver 15.
Northern Nursery, 6364 North Washington, Denver.
Nuzum Nurseries, 96 Arapahoe, Boulder.
Shapard's Gardens, 5350 East Arapahoe, Boulder.
Tower Nursery & Greenhouse, Inc., 17050 Smith Road, Aurora.
Western Evergreens, Inc., 14201 West 44th Avenue, Golden.
W. W. Wilmore Nurseries, Inc., 7615 West 38th Avenue, Wheat Ridge.

CONNECTICUT

Barnes Bros. Nursery Co., Box 357, Wallingford.
Brimfield Gardens Nursery, 245 Brimfield Road, Wethersfield.
Brouwer's Nurseries, Box 25, New London.
Brouwer's Nurseries, Jack, 55 Lester Street, New London.
Brouwer's Nurseries, Peter, 24 Lester Street, New London.
Burr, C. R. & Co., Inc. (dealer), 276 North Main Street, Manchester.
Imperial Nurseries, Post Office Box 1000, East Hartford.
Reynold's Farms Nurseries, Box 30, South Norwalk.
Summer Hill Nursery, Summer Hill Road, Madison.
Verkade's Nurseries, 98 Gardner Avenue, New London.
White Flower Farm (dealer), Route 63, Litchfield.

DELAWARE

Beaver Valley Nursery, Inc., 5601 Concord Pike, Wilmington, 19800.
Buntings Nurseries, Inc., Selbyville, 19975.
Danegger's Hi-Way Nursery, Inc., Post Office Box 336, Milford, 19963.
Del-Mar-Va Nurseries, DuPont Boulevard, Lincoln, 19960.
Diamond State Nurseries, Rehoboth Road, Milford, 19963.
Evergreen Acres, Inc., R.F.D. 2, Middletown, 19709.
Huber Nurseries, Boxwood Road & Dodson Avenue, Wilmington, 19800.
Millcreek Nursery, Inc., Route 3, Pleasant Hill Road, Newark, 19711.
Peninsula Nurseries (grower), Hoolser Avenue, Selbyville, 19975.
Phillips Nurseries, Inc., 5014 Concord Pike, Wilmington, 19800.
J. R. Warrington & Son, Inc., Greenwood, 19950.

DISTRICT OF COLUMBIA

Bolgiano, F. W. & Co. (dealer), 411 New York Avenue NE., Washington.
Hecht Company, Arcadian Gardens (Goldfarb) (dealer), 4143 Branch Avenue SE., Washington.

FLORIDA

Blair's Nurseries, Post Office Box 306, MacClenny.
Imperial Nursery, Quincy.
Monticello Nursery Company, Monticello.

GEORGIA

Alcova Nurseries, 614 Emory Street, Covington.
Bedford Nursery, 1023 Oleander Drive, Augusta.
Cato's Nursery, Hall Street, Post Office Box 573, Bainbridge.
E. R. Cato's Nursery, Route 15, Box 498, Albany.
Dudley Nurseries, Inc., Box 609, Athens.
Evergreen Landscape Service, 430 Milledge Terrace, Athens.
Flowerwood Nursery, Post Office Box 206, Cairo.
Fruitland Nurseries, Box 3506, Augusta.
Green Thumb Gardens, 2841 Central Avenue, Augusta.
Calvin Harman Nursery, Stovall.
McCorkle Nurseries, Fort Gordon Highway, Augusta.
Miller Nursery, Post Office Box 5203, Augusta.
Monroe's Landscape Nursery Company, 1898 Monroe Drive, Atlanta.
Mountville Nurseries, Mountville.
Bob Nix Nursery, Route 3, Box 420, Albany.
Northeast Georgia Nursery, Jefferson Road, Athens.
Patch Nursery & Landscaping Company, Route 2, Leesburg.
Powell's Nurseries, Thomasville.
P. L. Smith Nursery, Box 276, 906 South Drive, Albany.
Wight Nurseries, Inc., Box 390, Cairo.

ILLINOIS

Anna Nursery, Anna.
Beloit Nurseries, South Beloit.
Bergman Nurseries, Inc., 3607 North 12th Street, Quincy.
Bork Nursery, 500 North Oak, Onarga, 60955.
Egyptian Nursery & Landscape Co., Farina, 62838.
Walter Elsner Landscape Co., 10214 South Bell Avenue, Chicago, 60643.
Chas. Fiore Nurseries, Inc., Post Office Box 67, Prairie View, 60069.
Frese Bros. Nursery, Route 6, Quincy.
Hanley's Nursery (dealer), Carbondale, 62902.
H. B. Hartline Farm, Route 1, Makanda, 62958.
Henry Nurseries, 1022 College, Henry, 61537.
D. Hill Nursery Co., Dundee.
Home Nursery Greenhouses, Inc., Box 181, Edwardsville, 62025.
Ireland's Nursery, Onarga, 60955.
Kankakee Nursery Co., Box 288, Kankakee.
Lafayette Home Nursery, Lafayette.
Leesley Nurseries, Inc., Route 1, Box 289, Libertyville.
Maywood Nursery Co., Box 322, Maywood.
Montgomery Ward & Co., Inc. (dealer), Main office: 619 West Chicago Avenue, Chicago (all outlets in United States).

Jim Moorhead's North Park Gardens, Inc., Route 1, Poplar Grove, 61065.
Onarga Nursery Co., Onarga.
Sapp's Nursery, Post Office Box 703, Mount Vernon, 62864.
Sears, Roebuck & Co. (Dealer), 925 South Homan Avenue, Chicago main office; (all outlets in United States).
R. H. Shumway Seedsman (dealer), 628 Cedar Street, Rockford.
Eugene A. de St. Aubin & Bros. Inc., Box 1, Addison.
Sunnyside Nursery, Route 1, Troy; and Edwardsville.
Ralph Synnestvedt & Assoc. Inc., 3602 Glenview Road, Glenview.
Vienna Nursery, Vienna.
Wandell's Twin City Nursery, Route 3, Urbana, 61801.
Waukegan Nursery, 220 North Green Bay Road, Waukegan.
Westman Evergreen Nurseries, 13700 South Street, Woodstock.
Wheeling Nurseries & Sky-View, Wholesale Nursery Sales Co., Inc., 642 South Milwaukee Avenue, Wheeling.

Indiana

Bebee Nursery, Route 3, Box 452, Alexandria, 46001.
Billings Nursery, Rural Route 4, Muncie, 47301.
Chesterton Nursery, R.F.D. 1, Box 314, Chesterton.
Crousore Nursery, Route 5, Kokomo.
Gar Creek Nursery, Rural Route 2, New Haven.
Hillside Nursery, Box 185, Dublin, 47335.
C. M. Hobbs & Sons, Inc., 9300 West Washington Street, Indianapolis (Bridgeport), 46231.
The Krider Nurseries, Inc., Middlebury, 46540.
Littleford Nurseries, Route 1, Vincennes.
Mathews Nursery & Landscape Service, 3100 West Ridge Road, Gary, 46408.
Whiteman's Gardens, Plymouth, 46563.

Iowa

Earl Ferris Nursery, 811 Fourth Street NE., Hampton.
Henry Field Seed & Nursery Co., Shenandoah.
Inter-State Nurseries, Inc., Hamburg, 51640.
Linn County Nurseries, Center Point.
May Seed & Nursery Co. (dealer), Shenandoah.
Mount Arbor Nurseries, Shenandoah, 51601.
Shenandoah Nurseries, 301 Wabash Avenue, Shenandoah.
Sherman Nursery Co., 1300 Grove Street, Charles City.
Smith Nursery Co., Post Office Box 511, Charles City, 50616.

Kansas

N. E. Bird Nursery, 8910 West 80th Street, Overland Park.
Blueville Nursery, Route 1, Manhattan.
Borst Nursery & Garden Center, 5118 South Broadway, Wichita.
Gabler's Nursery, 8131 Metcalf, Overland Park.
The Garden Shop, Inc., 6315 West 75th Street, Overland Park.
Goodland Greenhouse & Garden Center, 508 East 12th Street, Goodland.
Grutzmacher Nursery, 405 Webster Street, Clay Center.
Hillside Nursery, 2200 South Hillside, Wichita.
Holsinger Nursery Co., 2405 Merriam Lane, Kansas City.
Kansas Landscape & Nursery Co., 1416 East Iron, Salina.
Leavenworth Nurseries, 12th and Vilas, Leavenworth.
M. Meyer's Nursery, 5439 South Hydraulic, Wichita.
Ralph's Nursery & Garden Shop, 7929 Leavenworth Road, Bethel.
Rieke Nursery, 7036 Nieman Road, Shawnee.
Schnitzler Nursery Co., 2011 South Hillside, Wichita, 67211.
J. H. Skinner & Co., Route 6, Topeka.
Smith Floral Nursery, East 23d Street, Box 308, Lawrence.
Sunnyside Nursery, Inc., 6750 South Broadway, Wichita.
Twin Cedar Nursery, 120th Street and I-35 Highway, Olathe.
Williams & Harvey Village Nursery, 7223 Mission Road, Prairie Village.
Willis Nursery Co., Fifth and Cherry, Ottawa.

Kentucky

Arrow-Wood Nurseries, East River Road, Warsaw, 41095.
Boone-Gardiner Nurseries, 9409 Shelbyville Road, Louisville, 40222.
Elkhorn Nursery, Route 4, Lexington.
Hill's Nursery, Warsaw.
Hillenmeyer Nurseries, Lexington.
Theodore Klein Nurseries, Crestwood.
Leichhardt Hillview Nursery, Nashville Road, Bowling Green, 42101.
Lillard Nursery, Jeffersontown.
J. L. Morrill Nursery, R.F.D. 1, Cunningham.
Nick's Nursery, Route 2, Anchorage.
Sanders Bros. Nursery, Rural Route 4, Benton Road, Paducah.
Lawrence Sanders Nursery, 721 Kentucky Avenue, Paducah.
Schneidman Nursery, R.F.D. 8, Paducah.
Willadean Nurseries, Inc., Sparta, 41086.

Louisiana

Bailey's Nursery, Route 1, Box 84B, Forest Hill.
Casadaban's Nurseries, Abita Springs.
Clegg's Nursery, 4411 Florida Boulevard, Baton Rouge.
Grandview Nursery, R.F.D. Box 54, Youngsville.
Hillside Nursery, Folsom.
Jenkins Nursery, Route 2, Box 140-A, Amite.
Kraak Nursery, 1019 Central, Metairie.
Magnolia State Nursery, 8820 Greenville Springs Road, Baton Rouge.
McKee's Nursery, Post Office Box 749, Covington.
Mizzell's Nursery, Folsom.
Poole Brothers' Nursery, Lecompte.
Purkey's Nursery, Route 1, Forest Hill.
Richard's Nursery, Forest Hill.
Roach Nursery, Highway 80 West, West Monroe.
Straughan's Nursery, Loranger.
Tammia Nursery, Post Office Box 157, Slidell.
Williams' Nursery, Route 1, Forest Hill.
Windmill Hill Nursery, Route 4, Box 180, Franklinton.

Maryland

Andover Nurseries, Massey, 21650.
Angelica Nurseries, R.F.D. 1, Kennedyville, 21645.
Bountiful Ridge Nursery (dealer), Princess Anne, 21853.
Carroll Gardens (dealer), Box 310, Westminster, 21157.
Chesapeake Nursery, Inc., Salisbury, 21801.
Dolan's Evergreen Gardens, 1701 Bedford Street, Cumberland, 21501.
Eastern Shore Nurseries, Box 743, Easton, 21601.
C. T. Fooks Nursery, Route 4, Johnson Road, Salisbury, 21801.
Glencoe Gardens, York and Ensor Mill Road, Baltimore, 21200.
Greenwood Nursery, 316 Talbot Avenue, Laurel, 20810.
Gude, A. Sons Co., Route 355, Box 1010, Rockville, 20854.
Holloway Nursery, South Second Street, Delmar, 19940.
Holly Gardens Nursery, 83 Frost Avenue, Frostburg, 21532.
Kelly's Nursery, Massey, 21650.
Kimburthill, Inc. (Kalmia Farms Nursery), Post Office Box 96, Clarksville, 21029.
Kingsville Nurseries, Inc., Kingsville, 21087.
Longwood Nursery, Inc. (dealer), Route 1, Waldorf.
Meekins Evergreen Nursery, Post Office Box 254, Cambridge, 21613.
Pine Arbor Nursery, Dickerson Church Road, Dickerson, 20753.
Quaint Acres Nurseries, 11800 New Hampshire, Silver Spring, 20900.
Sehman's Nursery, Route 13A, Delmar, 19940.
Small, J. H. & Sons, 15910 Georgia Avenue, Rockville, 20850.
Smith's Garden Center (dealer), 1120 Shades Lane, Cumberland, 21501.
Stock Bros., Inc., 10500 Boswell Lane, Rockville, 20854.
Sudlersville Nursery, Sudlersville, 21668.
Ten Oaks Nursery, Ten Oaks Road, Clarksville, 21029.
Tingle Nursery Co., Pittsville, 21850.
Towson Nurseries, Inc., Paper Mill Road, Cockeysville, 21030.
Westminster Nurseries, Inc., Post Office Box 227, Westminster, 21157.
Wye Nursery, Route 50, Queenstown, 21658.

Massachusetts

Adams Nursery, Inc., Springfield Road, Westfield.
Atwater Nursery, 368 South Street, Agawam.
Day State Nursery, Box 155, Halifax.
Cherry Hill Nurseries, Cherry Hill Street, West Newbury.
Corliss Bros., Inc., Essex Road, Ipswich.
Littlefield-Wyman Nursery, Inc., 227 Centre Avenue, Abington.
Stobbart's Nurseries, 444 East Central Street, Franklin.
Veg-Acre Farm, Forestdale.
Weston Nurseries, Inc., 93 East Main Street, Hopkinton.
Winslow Nurseries, Inc., Pilgrim Road, Needham 92 .

Michigan

Ackerman Nurseries, 1013 Lake Street, Bridgman.
Berg Nursery, Star Route, Box 85A, Kingsford.
Carleton Nursery Co., 11529 Jones Road, Carleton.
Chiles Nursery, 24355 Telegraph Road, Flat Rock.
The Cottage Gardens, 2707 West St. Joseph Street, Lansing.
Dutch Mt. Nursery, Route 1, Box 167, Augusta, 49012.
Emlong Nurseries, Inc., Stevensville, 49127.
Farmington Gardens Nursery (dealer), 35620 Grand River, Farmington.
Larry Ganun Nursery, 3307 North Adrian Highway, Adrian.
Grootendorst Nursery, Box 123, Lakeside, 49116.
Housels Nursery & Garden Center, 8519 Lewis Avenue, Temperance.
M. J. Hunziker & Sons Nursery, Box 313, Niles.
Inland Orchards & Nurseries, Post Office Box 288, Marshall.
Lakeside Nursery, Sawyer.
Ed LaVigne & Son Nursery, 1555 Toben Road, Carleton.
The Monroe Nursery Co., and Ilgenfritz Nurseries, Inc., Post Office Box 665, Monroe.
Newport Nursery Co., 8226 North Stony Creek Road, Newport.
Pine Mountain Nursery, Star Route 2, Iron Mountain.
Ray & Fischer Nurseries, Rothbury.
Scheriff's Nursery, 1605 North Monroe, Monroe.
South Michigan Nursery, New Buffalo.
Spielman's (dealer), 2170 North Main, Adrian.
Zilke Bros. Nursery, Baroda.

Minnesota

Abrahamson's Nursery, Scandia.

Anderson's Nursery, 6555 Arrowhead Road, Duluth.

Andrews Nursery Co., Box 446, Faribault.

Bachman's Inc. (dealer), 6010 Lyndale Avenue, South, Minneapolis.

J. V. Bailey Nurseries, St. Paul; also Newport.

Bergeson Nursery, Fertile.

Cross Nursery, Box 193, Lakeville.

Donaldson's Flower Shop and Garden Lot (dealer), 601 Nicollet, Minneapolis; also Southdale, Minneapolis.

Donaldson's Garden Lot and Flower Shop (dealer), Miracle Mile, Rochester.

Duluth Glass Block Store (dealer), 128 West Superior Street, Duluth.

Elmore Nursery Co., Elmore.

Farmer Seed & Nursery Co. (dealer), Faribault (and all retail outlets in Minnesota).

Ferndale Nursery, Askov.

Fillmore County Nursery, Canton, 55922.

Flowerland Farms and Nursery, Shafer.

Fritz' Farm and Garden Center (dealer), Newport.

Garden and Lawn Center (dealer), Box 295, Wheaton.

Golden Rule Flower Shop and Garden Lot (dealer), Eighth and Robert, St. Paul.

Goldfine's Inc. (dealer), 700 Garfield, Duluth.

Grussendorf Nursery, 4022 Midway Road, Duluth.

Home Landscape Supply (dealer), R.F.D. 1, Ortonville, 56278.

Jewell Nurseries, Inc., Box 457, Lake City.

H. L. Johnson Garden Store and Nursery (dealer), 3625 West Lake Street, Minneapolis.

Judson Valley Nursery, Lake Crystal.

Killmer Northern Nurseries, 1700 West Larpenteur Avenue, St. Paul.

Lake Agassiz Nursery (dealer), Moorhead; also Retail Sales Yard at Fargo, N. Dak.

Lake City Nurseries, Inc., North Sixth Street, Lake City.

Law's Valley View Nurseries, Inc., Box 271, Hastings.

Lindstrom Nursery, Post Office Box 266, Lindstrom.

Meehan Bros. Nursery, 1215 Oakbury Road, Lake Elmo.

North Central Nursery Sales (dealer), Owatonna.

Owatonna Nursery Co., Inc., Rural Route 3, East Rose Street, Owatonna.

The Park Nurseries, 1200 St. Clair Avenue, St. Paul.

Peters Evergreen Nursery, Box 337, Sherburn.

Joe Priley's Nursery, 203 Eighth Avenue East, Duluth.

Rose Hill Nursery, 2380 West Larpenteur, St. Paul; also Box 495, Minneapolis.

Sargents Red Wing Nursery, Red Wing.

Scheidler F-M Nursery (dealer), 825 North Highway 75, Moorhead 56560.

Seeferts Hudson Road Nursery (dealer), Highway 12 and White Bear Avenue, St. Paul.

Shoppers' City Garden Center (dealer), c/o Donald Fritz, Glen Road, Newport; also outlets in Minneapolis and St. Paul.

Shoreacres Gardens (dealer), 640 Shoreacres Drive, Fairmont.

Springvale Nursery, 2627 Springvale Road, Duluth.

Summit Nurseries, Inc., Route 4, Stillwater.

Swedberg Nursery, Battle Lake.

Town and Country Flowers (dealer), 1301 South Second Street, Moorhead.

Trapper Hunt's Nursery, Bagley.

Wedge Nursery, Route 2, Albert Lea.

The Willmar Nursery (Irv Hanson) (dealer), Route 2, Box 31, Willmar.

Wright Nursery & Landscape Service, 2602 London Road, Duluth; also Larsmont.

Wy's Gardens (dealer), East Grand Forks.

Mississippi

Big River Nursery, Lula.

Gilmer Brothers Nursery, Route 2, Caledonia.

A. P. Miller & Sons Nursery, 1506 Main Street, Columbus.

T. G. Owen & Son, Inc., Box 946, Columbus.

C. W. Stuart & Co. (dealer), Bell Avenue and South 19th Street, Columbus.

Missouri

Bruening Nursery, Higginsville.

Houlihan Nursery Co., Mosley Road, Creve Coeur, 63141.

Forrest Keeling Nursery, Elsberry.

Logan's Nursery & Landscape Service, 1631 Independence Street, Cape Girardeau.

McCoy Nursery, Box 257, R.F.D. 3, Joplin.

Neosho Nurseries Co., Neosho.

Roller Nursery, Seligman.

Sarcoxie Nurseries (Wild Bros. Nursery Co.) (also seed grower), Sarcoxie.

Stark Bros. Nursery and Orchards Company, Louisiana.

Montana

Billings Nursery, Route 1, Box 47, Billings.

Garrett Nursery Co., 2226 Central Avenue West, Great Falls.

Holland Nursery, Route 4, Kalispell.

E. C. Moran (seed grower), Stanford.

Pierce's Nursery, 352 Highway 2 East, Kalispell.

Frank H. Rose Native Evergreens (seed dealer), 1020 Poplar Street, Missoula.

Nebraska

A B C Nursery, Route 1, Box 113, Scotts Bluff.

Marshall Nurseries, Arlington.

Plumfield Nurseries, Inc., 2105 Nye Avenue, Fremont.

New Jersey

Akerboom, Klaas, Route 1, Bridgeton.

Arcadian Gardens (Goldfarb) (dealer), Menlo Park Shopping Center, Route 1 and Parsonage Road, Menlo Park.

Arcadian Gardens (Goldfarb) (dealer), Garden State Plaza, Paramus.

Behren, E. H., Rural Delivery 1, Newfield.

Bobbink Nurseries, Inc., Box 124, Freehold.

Bongarzone Nursery, Wayside Road, Eatontown.

Bulk's Nurseries, Inc., Rural Delivery No. 3, Smithburg-Manalapin Road, Freehold.

Conifer Nursery, Rural Delivery, Mays Landing.

Cumberland Nurseries, Rural Delivery 1, Millville.

Cy's Nursery, Box 301, R.F.D. 4, Sewell.

D & D Rose Garden, 42 Monmouth Road, Eatontown.

Deerfield Nurseries, Box 32, Deerfield.

DeWilde's Rhodo, Lake Nursery, Rural Delivery 1, Bridgeton.

F & F Nurseries (grower), Box 126, Holmdel.

Hess Nurseries, Box 128, Wayne.

Hogbin Nursery, Frank, R.F.D., Williamstown.

Holly Ravine Nursery, R.F.D., Monroeville.

Howe Nurseries, 322 Burd Street, Pennington.

Jones Nursery, Harvey, Black Horse Pike, Williamstown.

Jones Nursery, Maurice, Black Horse Pike, Williamstown.

Jones Nursery, Wes, Black Horse Pike, Williamstown.

Kelsey Nursery Service (dealer), 104 Portland Road, Highlands.

Kluis Nurseries, 15 Woodland Court, Pompton Plains.

Lovetts Nursery, Inc., Phalanx Road, Lincroft.

McCarty Gardens, R.F.D., Mays Landing.

Moorestown Gardens, Inc., 55 East Oak Avenue, Moorestown.

Oakview Nursery, Inc., Sewell County House Road, Sewell.

Obert's Nursery, J., 169 Chestnut Street, Somerville.

Osterman Nursery, 525 Bound Brook Road, Middlesex.

Pearce Seed Co., Bridgeboro Road, Moorestown.

Jackson & Perkins Corp., Perkins-deWilde Division, Shiloh.

Piney-Hollow Nursery, Brewster and Dutch Mill Road, Newfield.

Pricketts Nursery, Mantua Blvd., Sewell.

Princeton Nurseries, Post Office Box 191, Princeton, 08540.

South Jersey Colonial Nurseries, Inc., Rural Delivery 1, Salem.

Split Rock Nursery, 218 Farview Avenue, Paramus.

Straub's Nursery, Lambs Road, Sewell.

Sunnybrook Nursery, Inc., Rural Delivery 1, Route 45, Swedesboro, 08085.

Vermeulen, John & Son, Inc., Neshanic Station.

Wells Nursery Inc., James S., Red Bank.

Whip-Poor-Will Nursery, Buck Hill and River Road, Woodbine.

Wilton, Michael F. & Sons, Sugarman Avenue, Rural Delivery 1, Millville.

Arcadian Gardens (Goldfarb) (dealer), South Highland Avenue, Ossining.

Arcadia Rose Co., (Dealer), 1000 South Main Street, Newark.

Babcock, Charles E., North Clinton Street, Dansville.

Bagatelle Nursery, Half Hollow Hills, Huntington Station (Box 196).

Buck & Son, William, Rural Delivery 3, Dansville.

Bulk's Nurseries, Inc., 610 West Montauk Highway, Babylon, Long Island.

City of Glass (Goldfarb) (dealer), Melville Road, Farmingdale, Long Island.

Congdon & Weller Wholesale Nursery, Mileblock Road, North Collins.

Congdon's Wholesale Nursery, Mileblock Road, North Collins.

Finnerty Nursery, 50 New York Avenue, Rensselaer.

Garden World, Inc. (Dealer), Francis Lewis Boulevard and 46th Avenue, Flushing.

Hathaway, Harry M. (Dealer), Rural Delivery 5, Amsterdam.

Jackson & Perkins Co., 1000 South Main Street, Newark.

Kelly Bros. Nursery, Inc., Box 430, 23 Maple Street, Dansville.

Lehde Nurseries, Edward, 86 French Road, Buffalo 24.

Maney's Nurseries, Pre-Emption Road, Geneva.

Maxwell, Bowden & Rice, Inc., Pre-Emption Road, Geneva.

McNair Nurseries, C. W., Rural Delivery 3, Dansville.

My Florist, Inc. (Goldfarb) (dealer), 160 East 57th Street, New York City.

Rosedale in Dutchess, Route 44, Millbrook.

Rosedale Nurseries, Inc., Sawmill River Road, Hawthorne.

Shemin, Emanuel, 3990 Boston Road, Bronx 69.

Shepard Nurseries, Rural Delivery 1, Skaneateles.

Smith, W. T. Corp. (dealer), 572 Castle Street, Geneva.

Stern's Nurseries, Inc., 404 William Street, Geneva.

Stuart, C. W. & Co., 165 East Union Street, Newark.

Westbrook Assoc., Inc., 33 Stony Hollow Road, Greenlawn.

Westbury Rose Co., Inc., Jericho Turnpike and Rose Avenue, Box 277, Westbury, Long Island.

Wheelock & Turnbull, Inc., Versailles Road, North Collins.

Woodlea Nursery, 615 Higbie Lane, West Islip.

Woodlea Nursery, Moriches.

North Carolina

Gilmore Plant & Bulb Co., Inc., Julian.

Lindley Nurseries, Inc., Greensboro.

Knox Porter Nursery, Post Office Box 1242, Rocky Mount.

Robbins Nursery, Inc., Willard.

Tinga Nursery, Route 1, Box 255, Castle Hayne.

North Dakota

Christianson Landscape Service (dealer), Box 244, Fargo.

Northwest Nursery Co., Valley City.

Talbott Drive-In Nursery (dealer), Route 2, Minot, 58701.

Ohio

Bentley's Hardy Plants, 4640 Lane Road, Perry.

The Berryhill Nursery Co., Route 6, Box 696, Springfield.

Bo-Jo Acres Nursery, 4197 Middle Ridge, Perry.

John Bos Nursery, 603 West Maple Street, Clyde.

Bosley Nurseries Inc., 9579 Mentor Avenue, Mentor.

L. P. Brick Nurseries, 483 Park Road, Painesville.

Champion's Lakeview Nursery Co. (dealer), Post Office Box 772, Painesville

Champion Nurseries, 3689 Main Street, Perry.

Louis Colavecchio (also Seed Grower), 1487 North Ridge Road, Painesville.

The Cole Nursery Co., 2000 West Jackson Street, Painesville and Circleville.

Donewell Nurseries, 2168 Mentor Avenue, Painesville

Dugan Nurseries, Center Street, Perry.

Fairview Floral Nursery, 27819 Center Ridge, Westlake.

The French Nursery Co., Race Street, Clyde.

Girard Bros. Nursery Co., Route 20, Geneva.

Gwenn-Gary Nursery, Route 2, Columbiana.

Hazel's Nursery, Luckey.

Hollandia Gardens, Inc., South Vienna.

Holly Gardens (Wm. A. Karolyi), Route 2, Perry.

Horton Nurseries, Inc., Route 20, Madison.

Edw. Y. James & Son Nursery, 25346 Butternut Ridge, North Olmsted.

The Kallay Brothers Co., Painesville.

Joseph J. Kern Rose Nursery, Jackson at Hensley, Mentor.

Kingwood Nurseries (also seed grower), South Center Street, Mentor.

Gerard K. Klyn, Inc., Box 200, Mentor.

Lakewood Nursery, 18105 Detroit Avenue, Lakewood, 44107.

McGuff Nursery, Route 3, New Carlisle.

Mellinger's Inc., Route 1, North Lima, 44452.

Mentor Heights Nursery, Chillicothe Road, Mentor.

Mentor Nurseries, Inc., Chillicothe Road, Mentor.

Mentor Rose Growers, Inc., 7711 Little Mt. Road, Mentor.

Moretti Nursery, 10 Fairport Nursery Road, Painesville.

The William A. Natorp Co., 4400 Reading Road, Cincinnati, 45229.

Neumeister Nursery, 9957 Cincinnati-Columbus Road, Cincinnati.

Ralph T. Norman Nurseries, Post Office Box 104, Painesville.

Paul F. Otto Nursery, Lane Road, Perry.

Ramsey's Nurseries, 7927 Madison Road, Thompson.

Rocknoll Nursery, Morrow.

Joe Sabo & Son Nursery, 365 Bowhall Road, Painesville.

Scarff's Nursery, Inc., New Carlisle.

The Siebenthaler Co., 3001 Catalpa Drive, Dayton, 45405.

Spring Hill Nurseries Co., Elm Street, Tipp City.

Paul J. Square Nursery, 120 Fairport Nursery Road, Painesville.

State Line Nursery, 6205 Lewis Avenue, West Toledo, 43612.

J. G. Stropkey & Sons Nursery, 485 Bowhall Road, Painesville.

Frank Toreki & Sons Nursery, 274 Bowhall Road, Painesville.

Wade & Gatton Nursery, Route 3, Bellville.

Warner Nursery, Route 4, Willoughby, 44094.

The Wayside Gardens Co., Mentor Avenue, Mentor.

Wilms Nursery, Depot Road, Salem.

York Nurseries, 895 Elm Street, Painesville.

Felix Zampini & Sons Nursery, Box 122, Route 84, Perry.

Oklahoma

Emil R. Bresser, Florist and Nurseryman, 1718 Locust, Box 973, Muskogee.

Capitol Garden Farms, 4200 North May Avenue, Oklahoma City.

Durant Nursery Company, Box 24, Durant.

Greenleaf Nursery Company, Route 1, Box 98, Park Hill.

Kenyon's Nursery, Dover.

Luke Nursery, Pauls Valley.

Ozark Nursery Co. (Ozanco Nurseries), c/o J. E. Davis, Post Office Box 381, Talhequah.

Sneed Nursery Company, Box 798, Oklahoma City.

Stark Nursery Company, Post Office Box 345, Porum.

Oregon

Arneson Nursery, Route 1, Box 111, Canby.

Aurora Nurseries, Route 2, Box 141, Aurora.

E. P. Baltz Nursery, Route 1, Box 748, Gresham.

Beaver Creek Nursery, Route 1, Box 1118, Gresham.

Benedict Nursery Co., 735 Northeast 87th Avenue, Portland.

Bixby Nursery, 6424 Monroe Road, Milwaukie 22.

E. J. Burnacci Nursery, Route 2, Box 840, Troutdale.

George Caldwell Wholesale Nursery (dealer), 4229 Southeast Division, Portland.

Calorwash Nursery, Route 1, Box 291A, Aurora.

Canby Evergreen Nursery, Route 1, Box 152, Canby.

Carlton Nursery Co. (dealer), Post Office Box 8, Forest Grove.

Clinton Nursery, 2630 Southeast 75th Avenue, Portland 6.

F. A. Doerfler & Sons Nursery, 250 Lancaster Drive NE., Salem.

Doty & Doerner, Inc., 6691 Southwest Capitol Highway, Portland 1.

Drew's Nursery, 13765 Tualatin Valley Highway, Beaverton.

Carl Elkstrom Nursery, Route 2, Box 840, Gresham.

Femrite's Nursery, Route 2, Box 355, Troutdale.

Ferris Quality Nursery, 448 Northeast Loomis Street, Newport.

Field Nursery, Route 2, Box 1107, Troutdale.

Four-Mile Nursery, Route 3, Box 121, Canby.

Garden Center Nursery (dealer), 4631 South Pacific Highway, Medford.

Gasser's Nursery, Route 2, Box 128, Oregon City.

Eddie Handy Nursery, 16440 Southeast Main Street, Portland.

Handy Nursery Co., 17216 Northeast Sandy Boulevard, Portland 30.

Hazel Dell Gardens, Route 1, Box 465, Canby.

Hood View Acres, Route 5, Box 498, Oregon City.

Kelso Nursery, Route 1, Box 205, Boring.

Jack Leslie, 382 Northeast Third Street, Post Office Box 404, Cornelius.

Lindstrom's Nursery, Post Office Box 92, Seaside.

Mason's Nursery, 13890 Southeast Ambler Road, Clackamas.

Milton Nursery Co., Box 7, Milton-Freewater.

Mitsch Nursery, Route 2, Box 34, Aurora.

Motz & Son Nursery, Route 2, Box 54, Portland.

Harry Park Nursery, Route 2, Box 829, Gresham.

H. L. Pearcy Nursery Co., Route 2, Box 97, Salem.

Portland Wholesale Nursery Co. (dealer), 5050 Southeast Stark Street, Portland.

Powell Valley Nursery, Route 2, Box 257, Gresham.

The Rhododendron Nursery, 2332 Southeast 42d Avenue, Portland.

Rich Northwest Nurseries, Inc., Route 1, Box 330, Hillsboro.

Rich & Sons Nursery, Route 1, Hillsboro.

W. B. Sanders Nursery, 11165 Southwest Naeve Street, Tigard 23.

Schmidt Bros. Nursery, Route 2, Box 390, Troutdale.

Sharp's Nursery, 7430 Southeast Powell Boulevard, Portland 6.

Sherwood Nursery Co., Corbett.

Staab's Nursery, Route 1, Box 27, Boring.

Floyd Stafford's Nursery, Route 2, Box 1075, Troutdale.

Paul Stenzel, 14110 Northeast Glisan, Portland.

Surface Nursery, Route 1, Box 832, Gresham.

Alfred Teufel Nursery (dealer), 12345 Northwest Cornell Road, Portland.

Villa Nursery, Box 5137, Portland.

Glenn Walters Nursery, Route 4, Box 142, Hillsboro.

Vern W. Wasson, Route 2, Box 1035. Troutdale.

West Oregon Nursery, 3550 Northwest Saltzman Road, Portland.

Mel Wills Nursery, Route 2, Box 113, Troutdale.

Wil-Chris Acres, Route 2, Box 105, Sherwood.

Pennsylvania

Angelica Nurseries, Inc., Rural Delivery 1, Mohnton, 19540.

Appalachian Nurseries, Box 87, Waynesboro, 17268.

Barrcrest Nursery (dealer), 1725 Marietta Avenue, Lancaster, 17603.

Bausher & Teman Company (dealer), 458 Linden Street, Allentown.

Bercaw's Nursery, Route 4, Waynesboro 17268.

Bloodgood Nurseries, Rural Delivery 1, Route 313, Doylestown.

Bloming Valley Nurseries, Route 1, Meadville.

Braine & Foreman, Rural Delivery 2, Sharon.

Perey Brown Nursery, Inc., Gibralter.

Cacoosing Nurseries, Rural Delivery 1, Sinking Springs, 19608.

The Conard-Pyle Co., West Grove, 19390.

Darlington Nursery, Inc. (dealer), 1400 Beechwood Boulevard, Pittsburgh 15217.

Dauber's Nurseries, 1705 North George Street, York, 17404.

DeKalb Nurseries, Inc., 2700 DeKalb Street, Post Office Box 67, Norristown.

Fairview Evergreen Nurseries (seed grower), 131 East Water Street, Fairview.

Farr Nursery, Womelsdorf 19567.

Fetherolf's Nurseries, Rural Delivery 4, West Chester, 19380.

Gimbel Bros. (dealer), Eighth and Market Streets, Philadelphia.

W. S. Hamilton & Son (dealer), 278 Bridgewater Road, Chester, 19015.

Hansen Brothers Nurseries, Inc., 472 South Gulph Road, King of Prussia.

Hansen's Ground Covers, 1268 Montgomery Avenue, Narberth.

Harborcreek Nursery, Route 20, Harborcreek.

King Nursery, Rural Delivery 5, Greensburg.

Kraynak Nursery, 2525 East State Street, Sharon.

LaBars' Rhodendron Nursery, West Bryant Street, Stroudsburg.

Lincoln Way Nursery, Rural Delivery 2, West Lincoln Highway, Coatesville.

Mayfair Nurseries, Rural Delivery 2, Nichols, New York (Bradford County, Pa.).

Musser Forests, Inc. (seed grower), Box 640, Route 110, Indiana.

Paint Creek Nursery, Shippensville.

Pallach Bros. Nurseries, Inc., Route 1, Harmony, 16037.

Pendale Nurseries (dealer), 450 Washington Road, Mount Lebanon, 15228.

Pikes Peak Nurseries (Division of Clearfield Bituminous Coal Corp.), Eighth and Water Streets, Indiana.

Pitzonka Nurseries, Inc., Bristol-Oxford Valley Road, Bristol.

Richard Schwoebel, 20 North Haverford Avenue, Ardmore.

Slater Supply Co., Inc. (dealer), 5081 Brightwood Road, Bethel Park.

J. Franklin Styer Nurseries, Inc., Concordville, 19331.
John F. Styer Landscape Nurseries, Box 37, Route 1, Concordville.
Styer's Garden Center (dealer), Concordville, 19331.
Upper Bank Nurseries, Inc., South Orange Street, Media, 19063.
Woodland Nursery, Rural Delivery 1, Perkiomenville.

RHODE ISLAND

Bald Hill Nurseries, Inc., Bald Hill Road, Pontiac.
Boulevard Nurseries, 389 West Main Road, Newport.
Forest Hills Nurseries, Inc., 1073 Reservoir Avenue, Cranston 10.
Hoogendoorn, C., 408 Turner Road, Newport.
Rhode Island Nurseries, Inc., East Main Road, Newport.
Sowams Nursery, 82 Sowams Road, Barrington.

SOUTH CAROLINA

Carolina Floral Nursery, Mount Holly.
Greer Nursery, West Poinsett (Old Highway 29), Greer.
Magnolia Gardens & Nurseries, Route 2, Johns Island.
Owens Nursery, Wiskey Road, Aiken.

SOUTH DAKOTA

Brookings Nursery (dealer) (Also known as Modern Landscaping Service), Box 359, Brookings.
Arthur Christensen (dealer), 4010 Jackson Boulevard, Rapid City.
Gurney Seed & Nursery Co., Second and Capitol Streets, Yankton.
Jake's Landscaping (dealer), Colton.
Landscape Improvement (dealer), 524 11th Avenue, Brookings.
Purington Nursery (dealer), 503 Lacrosse, Rapid City.
Wilson Nursery & Landscaping (dealer), R.F.D. 1, Brookings.

TENNESSEE

Adcock Nursery, Route 3, McMinnville.
Barker Brothers (dealer), Route 2, McMinnville.
Vernon Barnes Nursery (dealer), Post Office Box 250, McMinnville.
Boyd Nursery Co., Inc., Box 71, McMinnville.
John D. Boyd, Bone Cave.
Cartwright Nurseries, 10650 Poplar Street, Collierville.
Arnold C. Clark Nursery, Route 2, McMinnville.
Commercial Nursery, Dechard.
Crimson Dale Nursery, Winchester.
Easterly-Varnell Nurseries, Route 6, Box 543, Cleveland.
Evergreen Nurseries, 7433 Poplar Pike, Germantown.
Fairview Nursery (dealer), Route 2, McMinnville.
Faulkner Springs Nursery, Post Office Box 242, McMinnville.
Flower City Nurseries, Route 3, McMinnville.
Forest Nursery Co., Inc., Box 311, McMinnville.
Globe Wholesale Nursery, Post Office Box 249, McMinnville.
Groves Nursery, Winchester.
H. G. Hallum Nursery (dealer), Route 3, McMinnville.
Hawkersmith & Sons Nursery, Route 2, Tullahoma.
Haynesfield Nurseries, Route 4, Bristol.
High Hill Nursery, Route 2, McMinnville.
Howell Nurseries, Inc., 2407 Brooks Road, Knoxville.
C. A. Jones Nursery (dealer), Route 2, McMinnville.
Morning Star Nursery, Highway 45 West, Rives.
Morse Brothers Nursery, Route 8, Chattanooga.
Mountain Wholesale, Bone Cave.
Murphy Nursery Company, Smithville.
Phytotaktor, H. M. Templeton, Jr., Winchester.
The H. R. Potter Nursery, Route 1, Joelton.
John Richardson Nursery (dealer), Route 2, McMinnville.
Sanders Nursery, Winchester.
Savage Farm Nursery (dealer), Box 125, McMinnville.
Scott Bros. Nursery Co. (dealer), Route 2, McMinnville.
Osban Scott Nursery (dealer), Box 123, McMinnville.
Scruggs Nursery, Route 2, McMinnville.
Smith Brothers Nursery, Box 221, McMinnville.
Southern Nursery & Landscape Company, Winchester.
Stewart's Nursery Company, Route 4, McMinnville.
J. P. & Claude Stubblefield, Route 6, McMinnville.
Tate Dykes Nursery (dealer), Route 2, McMinnville.
Tate Nursery, Route 2, McMinnville.
Tennessee Valley Nursery, Winchester.
The Triangle Nursery (dealer), Route 2, McMinnville.
Warren County Nursery, Route 6, McMinnville.
Robert Yates Nursery, Bone Cave.

TEXAS

Wise Adkisson & Sons, 1605 Walnut Street, Greenville.
Aldridge Nursery, Von Ormy.
Baker Brothers Company, Box 828, Fort Worth.
Groce Nursery (dealer), Route 2, Box 58, Willis.
Lambert Landscape Company (dealer), Valleyview Road, Dallas.
Magnolia Plant Farm (dealer), Route 3, Box 449, Conroe.
Pope Nursery, 4020 Race Street, Fort Worth.
Twitty Nursery, Box 777, Texarkana.
Verhalen Nursery Company, Scottsville.
Wolfe Nursery, Inc., Box 811, Stephenville.

UTAH

Glover's Nursery & Floral, 7195 South State Street, Midvale.
Pehrson Floral & Nursery, 1180 Canyon Road, Logan.
Pineae Greenhouses, Inc., 675 North Main, Centerville.
Porter-Walton Co., 522 South Third West, Centerville. Mail address—Box 1619, Salt Lake City.
Wuthrick Nursery, 1115 North Main, Logan.

VIRGINIA

Blue Ridge Gardens, Inc., 1830 Apperson Drive, Salem, 24153.
Blue Ridge Nursery, Elliston, 24087.
Capper's Nursery, McLean, 22101.
Cole Nurseries, Inc., Post Office Box 443, Bluefield, W. Va., 24651 (nursery in Tazewell County, Va.).
Cole Nurseries, Inc., Route 1, Box 332, Bristol, 24201.
Cox's Nursery, R.F.D. 2, Box 386-A, Christiansburg, 24073.
Davis Bros. Nursery, R.F.D. 2, Rose Hill 24281.
Eastern Shore Nursery of Virginia, Post Office Box 48, Keller, 23401.
Enterprise Nursery, Hiltons, 24258.
Gladsgay Gardens Nursery, 6311 Three Chopt Road, Richmond, 23220.
Greenbrier Farms, Inc., 2145 Thrasher Road, Chesapeake, 23519.
Gresham's Nursery, Inc., 6801 Midlothian Pike, Richmond, 23200.
Gulf Stream Nursery, Wachapreague, 23480.
Hecht Co. Arcadian Gardens (Goldfarb) (dealer), 620 North Randolph Street, Arlington.
Holly Creek Nursery, Route 1, Melfa, 23410.
Ingleside Plantation Nurseries, Oak Grove, 22443.
Laird's Nurseries, 8900 Broad Street Road, Richmond, 23229.
J. Lewis & Sons Nursery, Cascade, 24069.
Phillipswood Garden Center, 1845 Abingdon Highway, Bristol, 24201.
South Side Nurseries, Inc., Route 15, Box 471, Richmond, 23234.
Tankard Nurseries, Exmore, 23350.
Watkins Nurseries, Inc., R.F.D. 2, Midlothian, 23113.
Waynesboro Nurseries, Inc., Waynesboro, 22980.
William & Harvey Nursery, 3608 West Cary Street, Post Office Box 7037, Richmond, 23221.
Winn Nursery, Inc., 6926 Granby Street, Norfolk, 23505.
Wood-Howel Nurseries, Inc., 4461 Lee Highway, Bristol, 24201.
Yeatts Nursery Inc., Martinsville, 24112.

WASHINGTON

Norman Anderson Nursery, Route 1, Box 272, Orchards.
Briggs Nursery, 4407 Gleason Road, Olympia.
Chenoweth's Mount Vernon Nursery, Second and Taylor, Mount Vernon.
Clarke Nursery, Long Beach.
Columbia & Okanogan Nursery, Second and Mission, Wenatchee.
Gothmann Nursery, 2000 Inland Empire Way, Spokane.
Dan Hallowell Pioneer Nursery, Route 1, Box 665, Ridgefield.
A. H. Hembree Nursery, East 7809 Indiana, Spokane.
Inland Empire Nursery, East 17213 Sprague, Greenacres.
Kent Nursery, 8812 South 218th Street, Kent.
Krause Nursery, Inc., East 3900 Sprague Avenue, Spokane 31.
May Nursery Co., 212 North Third Avenue, Yakima.
Mayhan Nursery, East 15723 Sprague Avenue, Veradale.
Mayhan Nursery (seed grower), East 15723 Sprague Avenue, Veradale.
South Side Nursery, Box 66, Kelso.
Stanek's Nursery, East 2929 29th Avenue, Spokane.
Viberts Nursery, 15025 124th Avenue NE., Woodinville.
Viewcrest Nurseries, 9617 Northeast Burton Road, Vancouver.
Walter's Nursery, 7405 Stewart Avenue, Puyallup.
Wells Nursery, 424 East Section Street, Mount Vernon.

WEST VIRGINIA

Conner and Amos Garden Center, 129 Old Dutch Road, Charleston, 25300.
Conner and Amos Nursery Co., Route 2, Elizabeth, 26143.
Gold Chestnut Nursery, Cowen, 26664.
Home Nursery Co., Box 126, Fort Gay, 25514.
Kenova Gardens, 1601 Sycamore Street, Kenova, 25530.
Lavalette Landscape Nursery, Fifth Street Hill, Lavalette, 25535.
Myer's Nursery, Route 2, Huntington, 25700.
Pike Vue Nursery, 1691 Washington Pike, Wellsburg, 26070.
White Sulphur Springs Nursery, Box D-540, White Sulphur Springs, 24986.

WISCONSIN

Dunne's Nursery, Stateline Road, Beloit.
Dunne's Nursery & Greenhouse (dealer), Highway 15 West, Delavan.
Evergreen Nursery Co., Route 3, Sturgeon Bay.
Fancher's Nursery, Sturtevant.
J. W. Jung Seed Co., Randolph.
McKay Nursery Co., Waterloo, 55594.
L. L. Olds Seed Co. (dealer), Madison, 53701 (also new garden center at Beltline & Fish Hatchery Road).

Pippert Nurseries, Inc., Cleveland.
Suthers Moundview Nursery, Platteville.

(Sec. 9, 37 Stat. 318, sec. 106, 71 Stat. 33; 7 U.S.C. 162, 150ee. Interprets or applies sec. 8, 37 Stat. 318, as amended; 7 U.S.C. 161; 29 F.R. 16210, as amended, 30 F.R. 5801; 7 CFR 301.38)

This notice shall become effective December 23, 1965.

This notice lists those establishments determined by the Director of the Plant Pest Control Division to be growing only rust resistant Berberis, Mahoberberis, and Mahonia plants listed in § 301.38–5a and that therefore may ship Berberis, Mahoberberis, and Mahonia plants without certification. It relieves certain restrictions of the Black Stem Rust Quarantine and should be made effective promptly to be of maximum benefit to persons subject to the restrictions which are being relieved. Accordingly, it is found upon good cause under section 4 of the Administrative Procedure Act (5 U.S.C. 1003), that notice and other public procedure with regard to this action are impracticable and unnecessary, and good cause is found for making the notice effective less than 30 days after publication in the FEDERAL REGISTER.

Done at Hyattsville, Md., this 17th day of December 1965.

E. D. BURGESS,
Director,
Plant Pest Control Division.

[F.R. Doc. 65–13708; Filed, Dec. 22, 1965; 8:47 a.m.]

Consumer and Marketing Service

[Marketing Agreement 146]

PEANUTS

Outgoing Quality Regulation, and Terms and Conditions of Indemnification Applicable to 1965 Crop

Pursuant to the provisions of sections 32, 34, and 36 of the marketing agreement regulating the quality of domestically produced peanuts theretofore entered into between the Secretary of Agriculture and various handlers of peanuts (30 F.R. 9402) and upon recommendation of the Peanut Administrative Committee established pursuant to such agreement and other information it is hereby found that the respective amendments hereinafter set forth to the Outgoing Quality Regulation (30 F.R. 9407, 11648) and the Terms and Conditions of Indemnification Applicable to 1965 Crop Peanuts (30 F.R. 9407, 11648) will tend to effectuate the objectives of the Agricultural Marketing Agreement Act of 1937, as amended, and of such agreement.

Amendment of the Outgoing Quality Regulation will give handlers the option of having peanuts, other than pickouts, destined for crushing, tested for aflatoxin prior to their being crushed. Previously, only the meal, resulting from crushing of such peanuts, could be tested for aflatoxin to determine its suitability for feed use. Thus, the handler will be able to sell such peanuts with less difficulty and possibly at a better price.

Therefore, the last sentence of paragraph (g) of the Outgoing Quality Regulation (30 F.R. 9407, 11648) is deleted and replaced by the following:

However, peanuts other than pickouts and meal from peanuts other than pickouts in specifically identified lots of not more than 50 tons each, may be sampled by Federal or Federal-State inspectors, or by the area association if authorized by the Committee, and tested for aflatoxin by laboratories approved or operated by Consumer and Marketing Service, at handler's or crusher's expense, and if such meet Committee standards, the meal may be disposed of for feed use.

Amendment of the Terms and Conditions of Indemnification Applicable to 1965 Crop Peanuts is necessary to correct the screen size openings used for determining indemnification rates on the portion of whole kernels in lots of Virginia, Runner and Spanish type peanuts "with splits" so that such screen size openings agree with those set forth in the Outgoing Quality Regulation for such peanuts. Such specifications were originally meant to be identical.

Therefore, subparagraph (c) of the last paragraph of the Terms and Conditions of Indemnification Applicable to 1965 Crop Peanuts (30 F.R. 9407, 11648) is revised to read as follows:

(c) Whole kernels (which will not pass through screens of the following size openings: Virginia 15/64 x 1" slot, Runner 15/64 x ¾" slot, Spanish 15/64 x ¾" slot), 17.12 cents per lb.

The Peanut Administrative Committee has recommended that these amendments be issued as soon as possible so as to implement and effectuate the provisions of the marketing agreement dealing with outgoing quality regulations and terms and conditions of indemnification. Marketing of the 1965 peanut crop is underway and such outgoing quality regulations and terms and conditions for indemnification for actual operation under the agreement should therefore be modified and made effective as soon as possible, i.e., on the effective date specified herein. Handlers of peanuts who will be affected by such amendments have signed the marketing agreement authorizing the issuance of such regulations and terms and conditions of indemnification, they are represented on the Committee which recommended such amendments, and time does not permit notice to such handlers of the amendments.

The foregoing amendments of the Outgoing Quality Regulation and Terms and Conditions of Indemnification Applicable to 1965 Crop Peanuts are hereby approved and issued this 17th day of December 1965, to become effective December 17, 1965.

PAUL A. NICHOLSON,
Deputy Director, Fruit and Vegetable Division, Consumer and Marketing Service.

[F.R. Doc. 65–13687; Filed, Dec. 22, 1965; 8:45 a.m.]

Office of the Secretary

ARKANSAS

Designation of Areas for Emergency Loans

For the purpose of making emergency loans pursuant to section 321 of the Consolidated Farmers Home Administration Act of 1961 (7 U.S.C. 1961), it has been determined that in the hereinafter-named counties in the State of Arkansas natural disasters have caused a need for agricultural credit not readily available from commercial banks, cooperative lending agencies, or other responsible sources.

ARKANSAS

Boone.
Bradley.
Calhoun.
Clark.
Columbia.
Faulkner.
Independence.
Little River.
Ouachita.
Union.
White.
Yell.

Pursuant to the authority set forth above, emergency loans will not be made in the above-named counties after June 30, 1966, except to applicants who previously received emergency or special livestock loan assistance and who can qualify under established policies and procedures.

Done at Washington, D.C., this 17th day of December 1965.

ORVILLE L. FREEMAN,
Secretary.

[F.R. Doc. 65–13688; Filed, Dec. 22, 1965; 8:45 a.m.]

CIVIL AERONAUTICS BOARD

[Docket No. 16773; Order E–23012]

BRANIFF AIRWAYS, INC.

Order Regarding Proposed Jet and Propeller Fares Between Houston and San Antonio

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 17th day of December 1965.

By tariff revisions,[1] filed November 22, 1965, and marked to become effective December 22, 1965, Braniff Airways, Inc. (Braniff), proposes to add new jet and propeller fares between Houston and San Antonio. The proposal covers both first class and coach services. No complaints have been filed.

In support of its proposal, Braniff states that the propeller fares would be at the same level as those published by another carrier and that the jet fares would be at the same level as the proposed propeller fares.

Upon consideration of all relevant matters, the Board finds that the proposed tariff revisions may be unjust or unreasonable, or unduly discriminatory, or unduly preferential, or unduly prejudicial, or otherwise unlawful, and should be investigated. Although the new propeller fares would be equal to those in effect for Eastern Air Lines, Inc. (Eastern), they would be significantly (approximately $1.80) above those in effect for American Airlines, Inc., Continental Air Lines, Inc., and Trans-Texas Airways. The Board permitted Eastern's higher fares to become effective in part because of its need for increased earnings (Order E-21637, dated January 4, 1965). No such need currently exists for Braniff, whose earnings trend has been favorable. Eastern's fare level cannot, therefore, become a basis for the fares of Braniff. The Board concludes that Braniff's proposed propeller fares are unwarranted and it will, therefore, suspend them pending investigation. Such action is consistent with recent orders by the Board suspending other proposed fare increases. (Orders E-22483 and E-22878, dated July 27, 1965, and November 12, 1965, respectively.)

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[1] Airline Tariff Publishers, Inc., agent, CAB No. 44. The proposed jet and propeller fares are $16.50 for one-way first-class service and $15.90 for coach.

The proposed jet fares would be at the level of Eastern's current propeller fares. However, they would be from 11 to 13 percent above the propeller fares in effect for other competing carriers in this market, which we consider as the maximum acceptable level for new fares. As the Board stated in Order E-22587, August 27, 1965, "There are no longer valid economic justifications for permitting the pricing of new jet service in trunkline markets at a level above propeller service." We will, therefore, suspend the jet proposals as well.

Accordingly, pursuant to the Federal Aviation Act of 1958, particularly sections 204(a), 403, 404, and 1002 thereof: *It is ordered*, That:

1. An investigation is instituted to determine whether the one-way fares between Houston and San Antonio on 31st Revised Page 57 of Airline Tariff Publishers, Inc., agent, CAB No. 44 and rules, regulations, or practices affecting such rates are, or will be, unjust or unreasonable, unjustly discriminatory, unduly preferential, unduly prejudicial, or otherwise unlawful, and if found to be unlawful, to determine and prescribe the lawful fares, and rules, regulations, and practices affecting such fares;

2. Pending hearing and decision by the Board, the one-way fares between Houston and San Antonio on 31st Revised Page 57 of Airline Tariff Publishers, Inc., agent, CAB No. 44 are suspended and their use deferred to and including March 21, 1966, unless otherwise ordered by the Board, and that no changes be made therein during the period of suspension except by order or special permission of the Board;

3. This investigation be assigned for hearing before an Examiner of the Board at a time and place hereafter to be designated; and

4. A copy of this order will be filed with the aforesaid tariff and be served on Braniff Airways, Inc., which is hereby made a party to this proceeding.

This order will be published in the FEDERAL REGISTER.

By the Civil Aeronautics Board.[3]

[SEAL] HAROLD R. SANDERSON,
Secretary.

[F.R. Doc. 65-13702; Filed, Dec. 22, 1965; 8:46 a.m.]

[Docket No. 16325]

CORDOVA AIRLINES, INC.

Temporary Points Service Investigation; Notice of Hearing

Notice is hereby given, pursuant to the provisions of the Federal Aviation Act of 1958, as amended, that a public hearing in the above-entitled proceeding will be held before the undersigned Examiner on February 1, 1966, at 10 a.m. (local time), in Room 8D-1, Hill Building, 632 Sixth Avenue, Anchorage, Alaska.

For information concerning the issues involved and other details in this proceeding, interested persons are referred to the prehearing conference report served on August 12, 1965, and other documents which are in the docket of this proceeding on file with the Docket Section of the Civil Aeronautics Board.

Dated at Washington, D.C., December 20, 1965.

[SEAL] RICHARD A. WALSH,
Hearing Examiner.

[F.R. Doc. 65-13703; Filed, Dec. 22, 1965; 8:46 a.m.]

[Docket No. 16312]

SERVICE TO LAKE TAHOE, CALIF. INVESTIGATION

Notice of Hearing

Notice is hereby given, pursuant to the provisions of the Federal Aviation Act of 1958, as amended, that a hearing in the above-entitled proceeding is assigned to be held on January 18, 1966, at 10 a.m., P.s.t., at the Tahoe Sands Motel located in Bijou, Calif., before the undersigned Hearing Examiner.

For information concerning the issues involved and other details in this proceeding, interested persons are referred to Board Orders E-22387, dated June 30, 1965, and E-22930, dated November 24, 1965, the prehearing conference report served October 11, 1965, the supplemental prehearing conference report served November 30, 1965, and other documents which are in the docket of this proceeding on file in the Docket Section of the Civil Aeronautics Board.

Dated at Washington, D.C., December 17, 1965.

[SEAL] ROBERT L. PARK,
Hearing Examiner.

[F.R. Doc. 65-13704; Filed, Dec. 22, 1965; 8:46 a.m.]

FEDERAL AVIATION AGENCY

GENERAL AVIATION DISTRICT OFFICE AT TULSA, OKLA.

Notice of Reopening

Notice is hereby given that on or about January 1, 1966, the General Aviation District Office at Tulsa, Okla., will be reopened. Services presently provided to the general aviation public by the General Aviation District Office at Oklahoma City, Okla., in the Eastern Oklahoma Counties of Osage, Washington, Nowata, Craig, Ottawa, Pawnee, Rogers, Mayes, Delaware, Creek, Tulsa, Wagoner, Cherokee, Adair, Okfuskee, Okmulgee, Muskogee, Sequoyah, McIntosh, Hughes, Pittsburg, Haskell, Latimer, Le Flore, Coal, Johnston, Atoka, Pushmataha, Marshall, Bryan, Choctaw and McCurtain, will be rendered by the Tulsa General Aviation District Office.

(Sec. 313(a), Federal Aviation Act of 1958; 49 U.S.C. 1354)

HENRY L. NEWMAN,
Director, Southwest Region.

[F.R. Doc. 65-13678; Filed, Dec. 22, 1965; 8:45 a.m.]

FEDERAL COMMUNICATIONS COMMISSION

[Docket Nos. 16368, 16369; FCC 65-1123]

CENTRAL BROADCASTING CORP. AND SECOND THURSDAY CORP.

Order Designating Applications for Consolidated Hearing on Stated Issues

In re applications of Central Broadcasting Corp., Madison, Tenn., Docket No. 16368, File No. BPH-3773; requests: 92.9 mc, No. 225; 25 kw; 171 feet. Second Thursday Corporation, Nashville, Tennessee, Docket No. 16369, File No. BPH-3778; requests: 92.9 mc, No. 225; 100 kw; 338 feet; for construction permits.

At a session of the Federal Communications Commission held at its offices in Washington, D.C., on the 15th day of December 1965;

The Commission having under consideration the above-captioned and described applications;

It appearing, that except as indicated by the issues specified below, each of the applicants is legally, technically, financially, and otherwise qualified (except that Second Thursday may not be financially qualified) to construct and operate as proposed; and

It further appearing, that the Second Thursday proposal specifies Nashville, Tenn., and the Central Broadcasting proposal (pursuant to the "25 mile" rule) specifies Madison, Tenn.; and

It further appearing, that Nashville and surrounding Davidson county (in which Madison is located) have joined to form a new metropolitan government, but information available to the Commission indicates that Madison nevertheless continues to retain its identity as a separate community; and

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[3] Dissenting statement of member Gillilland filed as part of original document.

It further appearing, that it is necessary to determine, pursuant to section 307(b) of the Communications Act, of 1934, as amended, which of the proposals would better provide a fair, efficient and equitable distribution of radio service; and

It further appearing, that the areas and populations to be served by the applicants are markedly different in size and that for the purpose of comparison, the areas and populations within the respective 1 mv/m contours together with the availability of other FM services (at least 1 mv/m) in such areas will be considered for the purpose of determining whether a comparative preference should accrue to either of the applicants; and

It further appearing, that Second Thursday has filed a bank letter indicating a willingness to lend $50,000 upon acceptable credit, but has failed to show the nature of the collateral or the bank's acceptance of it for the purpose of making the loan; and

It further appearing, that Second Thursday has failed to provide up-to-date financial information showing current assets sufficient to construct and operate the station without revenue for a period of 1 year or to show that available or commited funds will be supplemented by sufficient advertising or other revenue to enable it to discharge its financial obligations during the first year; and

It further appearing, that the Post Office Department is unable to provide the exact coordinates for the Fayette, Ala., Post Office, and as a consequence, it is not possible to determine whether the Second Thursday proposal has the requisite 180-mile separation from the unused channel assignment in that city; and

It further appearing, that, in view of the foregoing, the Commission is unable to make this statutory finding that a grant of the subject applications would serve the public interest, convenience, and necessity, and is of the opinion that the applications must be designated for hearing in a consolidated proceeding on the issues set forth below:

It is ordered, That, pursuant to section 309(e) of the Communications Act of 1934, as amended, the applications are designated for hearing in a consolidated proceeding, at a time and place to be specified in a subsequent order, upon the following issues:

1. To determine whether the distance from the site specified in the Second Thursday Corp. proposal to the main post office in Fayette, Ala., is 180 miles as required by § 73.207 of the Commission's rules, and if not, whether circumstances exist which would justify a waiver of this requirement.

2. To determine whether Second Thursday Corp. has available to it a valid loan commitment or other source of funds adequate to finance construction and operation of the proposed station for a period of 1 year.

3. To determine the areas and populations within each of the proposed 1 mv/m contours and the availability of other FM services (at least 1 mv/m) to such areas and populations.

4. To determine, in the light of section 307(b) of the Communications Act of 1934, as amended, which of the proposals would better provide a fair, efficient and equitable distribution of radio service.

5. To determine, in the event it is concluded that a choice between the applications should not be based solely on considerations relating to section 307(b) which of the proposals would better serve the public interest.

6. To determine, in the light of the evidence pursuant to the foregoing issues, which, if either, of the applications should be granted.

It is further ordered, That, to avail themselves of the opportunity to be heard, the applicants pursuant to § 1.221 (c) of the Commission rules, in person or by attorney, shall, within 20 days of the mailing of this order, file with the Commission in triplicate, a written appearance stating an intention to appear on the date fixed for the hearing and present evidence on the issues specified in this order.

It is further ordered, That the applicants herein shall, pursuant to section 311(a)(2) of the Communications Act of 1934, as amended, and § 1.594 of the Commission's rules, give notice of the hearing, either individually or, if feasible and consistent with the rules, jointly, within the time and in the manner prescribed in such rule, and shall advise the Commission of the publication of such notice as required by § 1.594(g) of the rules.

Released: December 20, 1965.

FEDERAL COMMUNICATIONS
COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 65-13715; Filed, Dec. 22, 1965; 8:47 a.m.]

[Docket No. 16366; FCC 65M-1628]

ITT WORLD COMMUNICATIONS INC.

Order Scheduling Hearing

In the matter of ITT World Communications Inc., Docket No. 16366; proposed revisions to its Tariff FCC No. 7 establishing rates and regulations for TIME-TRAN service.

It is ordered, This 20th day of December 1965, that Charles J. Frederick shall serve as presiding officer in the above-entitled proceeding; that the hearings shall be convened on February 15, 1966, at 10 a.m.; and that a prehearing conference shall be held on January 11, 1966, commencing at 10 a.m.; and, *It is further ordered*, That all proceedings shall be held in the offices of the Commission, Washington, D.C.

Released: December 20, 1965.

FEDERAL COMMUNICATIONS
COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 65-13716; Filed, Dec. 22, 1965; 8:47 a.m.]

[Docket No. 16299; FCC 65M-1623]

RADIO MARSHALL, INC.

Order After Prehearing Conference

In re application of: Radio Marshall, Inc., Marshall, Tex., Docket No. 16299, File No. BPH-4603; for construction permit.

The Hearing Examiner having under consideration the proceedings during prehearing conference held today in the above-entitled matter;

It is ordered, This 17th day of December 1965, that the hearing in the above-entitled proceeding is hereby rescheduled from January 13 until January 19, 1966, and will be convened at 10 a.m., Wednesday, January 19, at the Commission's offices, Washington, D.C.;

It is ordered further, That the applicant make two copies of its exhibits available to the Bureau counsel and one copy to the Hearing Examiner not later than January 12, 1966, and that the understandings, requests and directives established during today's prehearing conference are approved and the transcript of the conference proceedings is incorporated by reference herein with the same force and effect as if it were set out verbatim.

Released: December 17, 1965.

FEDERAL COMMUNICATIONS
COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 65-13717; Filed, Dec. 22, 1965; 8:47 a.m.]

[Docket No. 16250; FCC 65M-1619]

SERVICE ELECTRIC CABLE TV, INC.

Order After Prehearing Conference

In the matter of cease and desist order to be directed to Service Electric Cable TV, Inc., 206-208 East Third Street, Bethlehem, Pa.; Docket No. 16250.

The Hearing Examiner having under consideration:

(1) The "Motion to Postpone" filed by the respondent (Service Electric Cable TV, Inc.), on December 9, 1965, requesting that the hearing be postponed until February 21, 1966 (from December 20, 1965);

(2) The "Reply to Motion to Postpone," filed by the Commission's Field Engineering Bureau on December 13, 1965, in which the Bureau, the only other party to this proceeding, recites that it has no objection to the relief requested "since it appears that cases of interference heretofore reported to the Commission have been corrected to the satisfaction of the complainants," provided that the hearing will be rescheduled to an earlier date if it subsequently should appear that interference complaints are not being corrected promptly on notification thereof to the respondent;

(3) The Memorandum Opinion and Order of the Hearing Examiner released December 10, 1965 (FCC 65M-1594), scheduling a further prehearing conference to consider item (1), above; and

(4) The proceedings during the further prehearing conference held in Washington, D.C., on December 16, 1965;

It appearing, that disclosures in the pleadings which have been filed and on the record of the December 16 prehearing conference (item 4) make it unequivocably clear that all complaints of interference from the public to and including December 16, 1965, have been, and are being, remedied promptly, to the satisfaction of the complainants, by the respondent; that respondent has instituted procedures for remedying any such complaints in the future on a prompt basis; that the respondent needs the additional time requested by it in order for it to conduct and complete a study of a radiation problem that does not seem to it to involve interference to the public but which nevertheless is necessary for the appropriate application of the pertinent Commission rules; and that the respondent consequently has made a satisfactory showing of "good cause" for granting the relief requested;

It is ordered, This 17th day of December 1965, that item (1), above, is hereby granted, and that the hearing is rescheduled to convene on Thursday, February 24, 1966,[1] at Bethlehem, Pa., at a place to be announced subsequently; and

It is ordered further, That upon proper motion, and upon a showing therein either that respondent is not meeting its commitment to remedy promptly any future interference complaints that may be made, or that a significant number of such complaints have been received which may be attributable to some fault of the respondent, and which are inconveniencing the public, irrespective of whether they are being remedied promptly, the hearing may be rescheduled to an earlier date than February 24, 1966.

Released: December 17, 1965.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 65-13718; Filed, Dec. 22, 1965; 8:47 a.m.]

[Docket Nos. 16290, 16291; FCC 65M-1629]

WMGS, INC. (WMGS) AND OHIO RADIO, INC.

Order Continuing Prehearing Conference

In re applications of WMGS, INC. (WMGS), Bowling Green, Ohio, Docket No. 16290, File No. BR-3097; for renewal of license; Ohio Radio, Inc., Bowling Green, Ohio, Docket No. 16291, File No. BP-16423, for construction permit.

It is ordered, This 20th day of December 1965, due to the illness of the presiding Hearing Examiner, that the prehearing conference in the above-entitled proceeding, which was scheduled for December 20, 1965, is hereby continued to January 5, 1966, and will be held in the Offices of the Commission, Washington, D.C., commencing at 9 a.m.

Released: December 20, 1965.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 65-13719; Filed, Dec. 22, 1965; 8:47 a.m.]

FEDERAL MARITIME COMMISSION

TRANS-PACIFIC FREIGHT CONFERENCE AND NEW YORK FREIGHT BUREAU

Notice of Filing of Requests To Terminate Agreements

Notice is hereby given that the parties to the following inactive agreements, which now stand approved by the Commission under section 15 of the Shipping Act, 1916, as amended (39 Stat. 733, 75 Stat. 763, 46 U.S.C. 814), have requested that the same be withdrawn and terminated.

Agreement No. 85. Trans-Pacific Freight Conference of North China (Shanghai).

Termination requested by Mr. W. C. Galloway, Chairman, Pacific Coast Committee of Inward Trans-Pacific Steamship Lines, 635 Sacramento Street, San Francisco, Calif., 94111.

Agreement No. 5800. New York Freight Bureau (Shanghai).

Termination requested by Mr. J. A. Dennean, Chairman, New York Committee of Inward Far East Lines, 11 Broadway, New York, N.Y., 10004.

Agreement No. 4292. Joint Agreement between the above-named conferences.

Termination requested jointly by Mr. Dennean and Mr. Galloway.

These agreements provide for the establishment and maintenance of agreed rates and charges on cargo moving in the inbound trade from China to U.S. ports, and the same are currently being carried in suspense on the records of the Federal Maritime Commission.

Interested parties may inspect and obtain copies of the agreements at the Washington Office of the Federal Maritime Commission, Room 609; or may inspect the agreements at the offices of the District Managers, New York, N.Y., New Orleans, La., and San Francisco, Calif. Comments with reference to these terminations including requests for hearings, if desired, may be submitted to the Secretary, Federal Maritime Commission, Washington, D.C., 20573, within 20 days after publication of this notice in the FEDERAL REGISTER. A copy of any such statement should also be forwarded to the parties filing the requests (as hereinbefore indicated) and the comments should indicate that this has been done.

Dated: December 20, 1965.

THOMAS LISI,
Secretary.

[F.R. Doc. 65-13722; Filed, Dec. 22, 1965; 8:47 a.m.]

[Docket No. 65-49]

INTER-CONFERENCE AGREEMENTS; U.S./MEDITERRANEAN TRADES

Order of Investigation and Hearing

The member lines of the North Atlantic Mediterranean Freight Conference (7980) and the member lines of the Gulf/Mediterranean Ports Conference (134) have filed a "memorandum of understanding" for Commission approval which has been assigned Federal Maritime Commission Number 9413. Additionally, the member lines of the North Atlantic Conference and the member lines of the American Great Lakes-Mediterranean Eastbound Freight Conference (8250) have filed a substantially identical memorandum which has been assigned Federal Maritime Commission Agreement Number 9499.

Agreements 9413 and 9499 provide, inter alia, that the respective conferences may "confer, consider, recommend, and discuss from time to time matters of rates, charges, classifications and related tariff matters." Each conference retains the right of independent action.

Agreements 9413 and 9499 raise issues of fact and law, both with regard to provisions included and provisions omitted. The Commission is insufficiently advised by the proponents of said agreements as to the economic and competitive circumstances which have prompted them as well as the purposes for which they are intended. Moreover, the Commission is unable to determine from the face of the agreements the procedures and arrangements by which they are intended to be carried out.

Whereas, Agreements 9413 and 9499 comprehend anti-competitive activities by common carriers by water in the foreign commerce of the United States within the scope of section 15 of the Shipping Act, 1916; and

Whereas said agreements may adversely effect export commerce from Great Lakes, Atlantic seaboard and Gulf Coast ports of the United States to the Mediterranean area, the Commission finds that investigation and hearing is required in order to develop a record upon which agency action may be based;

Now therefore, it is ordered, That pursuant to sections 15 and 22 of the Shipping Act, 1916, an investigation and hearing is hereby instituted to determine (1) whether Agreements 9413 and/or 9499, as filed, are true copies, or, if oral, true and complete memoranda of the agreements of the parties; (2) whether Agreements 9413 and/or 9499 have been seasonably filed for approval; (3) whether Agreements 9413 and/or 9499 have been carried out in whole or in part, directly or indirectly, prior to approval; (4) whether Agreements 9413 and/or 9499 set out in adequate detail the procedures and arrangements under which the concerted activity authorized therein is to take place; (5) whether Agreements 9413 and/or 9499 should be required to provide for the filing of minutes and reports and, if so, to what extent and to what degree; (6) whether Agreements 9413 and/or 9499 are unjustly discriminatory or unfair as between carriers, shippers, exporters, importers, or ports, or between exporters from the United States and their foreign competitors or would operate to the detriment of the commerce of the United States, or be contrary to the public interest, or be in violation of the Shipping Act, 1916, and (7) whether Agreements 9413 and/or 9499 should be approved, disapproved or modified.

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[1] The Feb. 24 date has been established, both parties concurring, because Washington's Birthday, a legal holiday, falls on the 22d.

It is further ordered, That hearings with regard to Agreements 9413 and 9499 be consolidated;

It is further ordered, That the Conferences and the member lines thereof, listed in the Appendix attached hereto, be made respondents in this proceeding;

It is further ordered, That this matter be assigned for hearing and decision to an Examiner of the Commission's Office of Hearing Examiners, at a date and place to be hereafter determined and announced by the Presiding Examiner;

It is further ordered, That any persons, other than respondents, having any interest in this matter and desiring to participate in this proceeding, shall file a petition for leave to intervene with the Secretary, Federal Maritime Commission, Washington, D.C., 20573, on or before January 5, 1966, and upon respondents;

It is further ordered, That this order and notice of hearing be published in the FEDERAL REGISTER, that a copy of such order be served upon respondents, and that all future notices, orders, and decisions issued in this proceeding, including notices of time and place of prehearing conference, if any, be mailed directly to each party of record.

By the Commission.

[SEAL] THOMAS LISI,
Secretary.

APPENDIX

American Export Isbrandtsen Lines, Inc., 26 Broadway, New York, N.Y., 10004.
Blue Sea Line, Funch, Edye & Co., Inc., General Agents, 25 Broadway, New York, N.Y., 10004.
Central Gulf Steamship Corp., One Whitehall Street, New York, N.Y., 10004.
Compagnie Fabre Societe Generale De Transports Maritime (Fabre Line), Commander Shipping Co., Inc., General Agents, 17 State Street, New York, N.Y., 10004.
Compania Maritima del Nervion (Nervion Line), Kerr Steamship Co., Inc., General Agents, 51 Broad Street, New York, N.Y., 10004.
Concordia Line, Concordia Line—Great Lakes Service, Boise-Griffin Steamship Co., Inc., General Agents, 90 Broad Street, New York, N.Y., 10004.
Constellation Line, Van Nievelt, Goudriaan & Co.'s Stoomvaart Maatschappij, N.V., Constellation Navigation Inc., General Agents, 85 Broad Street, New York, N.Y., 10004.
Dampskibsselskabet Torm A/S (Torm Lines), Peralta Shipping Corp., General Agents, 85 Broad Street, New York, N.Y., 10004.
Det Forenede Dampskibs-Selskab A/S (Nordana Line), Barber Steamship Lines, Inc., General Agents, 17 Battery Place, New York, N.Y., 10004.
D.D.G. Hansa (Hansa Line), F. W. Hartmann & Co., Inc., General Agents, 120 Wall Street, New York, N.Y., 10004.
Fresco Line, F. W. Hartmann & Co., Inc., General Agents, 120 Wall Street, New York, N.Y., 10004.
Compagnie Generale Transatlantique (French Line), 17 Battery Place, New York, N.Y., 10004.
Hellenic Lines, Ltd., 39 Broadway, New York, N.Y., 10006.
Hoegh Lines, Kerr Steamship Co., Inc., General Agents, 29 Broadway, New York, N.Y., 10006.
Isthmian Lines, Inc., States Marine-Isthmian Agency, Inc., General Agents, 90 Broad Street, New York, N.Y., 10004.
"Italia," Societa per Azioni di Navigazione (Italian Line), 1 Whitehall Street, New York, N.Y., 10004.
Lykes Bros. Steamship Co., Inc., 821 Gravier Street, New Orleans, La., 70150.
Montship, Capo Great Lakes Service, Sagus Marine Corp., General Agents, 26 Broadway, New York, N.Y., 10004.
National Hellenic American Line, S.A., Cosmopolitan Shipping Co., Inc., General Agents, 42 Broadway, New York, N.Y., 10004.
Navigazione Alta Italia (Creole Line), Texas Transport & Terminal Co., Inc., General Agents, 1310 Whitney Building, New Orleans, La., 70130.
Niagara Line, Great Lakes Overseas, Inc., General Agents, 3400 Prudential Building, Chicago 1, Ill.
N. V. Nedlloyd Lijnen (Nedlloyd Line), Nedlloyd Lines, Inc., General Agents, 25 Broadway, New York, N.Y., 10004.
Orient Mid-East Lines, Orient Mid-East Great Lakes Service, Eagle Ocean Transport, Inc., General Agents, 29 Broadway, New York, N.Y., 10004.
P. N. Djakarta Lloyd, Texas Transport & Terminal Co., Inc., General Agents, 52 Broadway, New York, N.Y., 10004.
Prudential Lines, Inc., One Whitehall Street, New York, N.Y., 10004.
States Marine Lines, States Marine-Isthmian Agency, Inc., General Agents, 90 Broad Street, New York, N.Y., 10004.
United Arab Maritime Co. (Canada Orient Line), Keel Shipping Ltd., General Agents, 637 Craig Street, Montreal 3, P.Q., Canada.
Waterman Steamship Corp., 19 Rector Street, New York, N.Y., 10006.
Zim Israel Navigation Co., Ltd., American-Israeli Shipping Co., Inc., General Agents, 42 Broadway, New York, N.Y., 10004.

CONFERENCES

John T. Crook, Chairman, Gulf/Mediterranean Ports Conference, Suite 927, Whitney Building, New Orleans, La., 70130.
D. M. MacNeil, Chairman, North Atlantic Mediterranean Freight Conference, 17 Battery Place, New York, N.Y., 10004.
Eric G. Brown, Secretary, American Great Lakes-Mediterranean Eastbound Freight Conference, 72, Rue De La Republique (2me), Marseilles, France, 41895.

[F.R. Doc. 65-13723; Filed, Dec. 22, 1965; 8:47 a.m.]

[Docket No. 65-48]

NORTH ATLANTIC PORTUGAL FREIGHT CONFERENCE

Exclusive Patronage (Triple Rate) System and Contract; Order of Investigation and Hearing

The Commission has before it the application of the North Atlantic Portugal Freight Conference for permission to institute an exclusive patronage (triple rate) contract system, pursuant to section 14b of the Shipping Act, 1916.

A petition for a hearing on the application and as to the lawfulness of Article 6 of the proposed form of contract has been filed on behalf of E. I. du Pont de Nemours & Co., Inc., of Wilmington, Del., a shipper of cargo from U.S. North Atlantic ports to Portugal, which urges that:

1. Contract signatories (shippers) would not be entitled to the benefit of the lowest contract rates unless their customers/consignees in Portugal were also signatories.

2. Shippers who agree to patronize the conference carriers exclusively should be entitled to the lowest contract rates without further qualification.

3. The requirement in the contract that both the shipper/consignor and the receiver/consignee must be signatories to obtain the lowest contract rates places the U.S. shipper at a competitive disadvantage, and could well be detrimental to the commerce of the United States.

4. The provisions of said Article 6 of the proposed form of contract do not meet the requirements for approval under section 14b in that they may not be available to all shippers on "equal terms and conditions."

5. Section 14b does not envision or authorize contracts of conferences and carriers other than those which provide for a dual rate system, and the proposed form of contract providing for a triple rate system cannot be approved under that section.

It appearing that the petition of DuPont containing allegations which present issues of law and fact warrants a hearing; and that no information as to the need for this system in the trade has been furnished by the Conference as a basis for the Commission's consideration of this application and the proposed form of contract, the Commission is of the opinion that a hearing is required in order to determine whether said application and the proposed form of a contract should be approved, disapproved or modified in accordance with the general standards of section 14b and the express requirements of sections 14b (1) through (9) and whether the Commission's decision in The Dual Rate Cases to the effect that certain provisions of dual rate contracts be uniform, should govern the various provisions of said application and contract.

It is ordered, That pursuant to sections 14b and 22 of the Shipping Act, 1916, as amended, an investigation and hearing be instituted to determine whether (1) the proposed system and form of exclusive patronage (triple rate) contract of the member lines of the North Atlantic Portugal Freight Conference meet the requirements of section 14b, or will be detrimental to the commerce of the United States, contrary to the public interest, or unjustly discriminatory or unfair as between shippers, exporters, importers, or ports, or between exporters from the United States and their foreign competitors; and (2) the application of the Conference for permission to institute the proposed system should be granted pursuant to said section 14b and, if so, (3) the proposed form of exclusive patronage (triple rate) contract should be approved, disapproved or modified in accordance with the requirements of section 14b and the Commission's decision in The Dual Rate Cases.

It is further ordered, That the North Atlantic Portugal Freight Conference and its member lines, listed in the Appendix attached hereto, be made respondents in this proceeding.

It is further ordered, That this matter be assigned for hearing before an Examiner of the Commission's Office of Hearing Examiners at a date and place to be hereafter determined and announced by the Presiding Examiner.

It is further ordered, That any persons, other than respondents, having any interest in this matter, and desiring to participate in this proceeding, shall file a petition for leave to intervene with the Secretary, Federal Maritime Commission, Washington, D.C., 20573, on or before January 5, 1966; with copy to respondents.

It is further ordered, That this order and notice of hearing be published in the FEDERAL REGISTER, that a copy of such order be served upon respondents and E. I. du Pont de Nemours & Co., Inc., and that all future notices, orders and decisions issued in this proceeding, including notice of time and place of hearing and prehearing conference, be mailed directly to each party of record.

By the Commission.

[SEAL] THOMAS LISI,
Secretary.

APPENDIX

North Atlantic Portugal Freight Conference, P. J. Warmstein, Chairman, 26 Broadway, New York, N.Y., 10004.
American Export Isbrandtsen Lines, Inc., 26 Broadway, New York, N.Y., 10004.
Compagnie Fabre-Societe General de Transports Maritimes (Fabre Line), Black Diamond Steamship Co., General Agents, 2 Broadway, New York, N.Y., 10004.
Companhia De Navegacao Carregadores Acoreanos S.A.R.L., East Coast Overseas Corp., as Agents, 80 Broad Street, New York, N.Y., 10004.
Dampskibsselskabet Torm A/S (Torm Lines), Peralta Shipping Corp., as agents, 85 Broad Street, New York, N.Y., 10004.
Fresco Line, F. W. Hartmann & Co., Inc., General Agents, 120 Wall Street, New York, N.Y., 10005.
"Italia," Societa' Per Azioni Di Navigazione (Italian Line), One Whitehall Street, New York, N.Y., 10004.
E. I. du Pont de Nemours & Co., Inc., Don A. Boyd, Commerce Counsel, Wilmington, Del., 19898.

[F.R. Doc. 65-13724; Filed, Dec. 22, 1965; 8:47 a.m.]

SEA-LAND SERVICE, INC., AND DELAWARE RIVER TERMINALS, INC.

Notice of Agreement Filed for Approval

Notice is hereby given that the following agreement has been filed with the Commission for approval pursuant to section 15 of the Shipping Act, 1916, as amended (39 Stat. 733, 75 Stat. 763, 46 U.S.C. 814).

Interested parties may inspect and obtain a copy of the agreement at the Washington office of the Federal Maritime Commission, 1321 H Street NW., Room 301; or may inspect agreements at the offices of the District Managers, New York, N.Y., New Orleans, La., and San Francisco, Calif. Comments with reference to an agreement including a request for hearing, if desired, may be submitted to the Secretary, Federal Maritime Commission, Washington, D.C., 20573, within 20 days after publication of this notice in the FEDERAL REGISTER. A copy of any such statement should also be forwarded to the party filing the agreement (as indicated hereinafter), and the comments should indicate that this has been done.

Notice of agreement filed for approval by

Sea-Land Service, Inc., Box 1050, Elizabeth, N.J., 02207.

Agreement No. T-1887, between Sea-Land Service, Inc. (Sea-Land) and Delaware River Terminals, Inc. (Lessor) provides for a 20-year lease of certain terminal property in Philadelphia, Pa., to be used by Sea-Land for the loading and unloading of vessels and for the handling, storing, receipt and delivery of cargo and containers. The agreement provides that Lessor will be responsible for certain improvements and construction at the leased premises so the property will be made suitable for container operations by Sea-Land. Sea-Land has a preferential use of the berthing facilities but may upon 90 days notice to the Lessor obtain the exclusive use of the berthing facilities for the remainder of the term. As compensation for the lease Sea-Land agrees to pay an annual fixed rental as specified in the agreement. The rental will be increased if and when Sea-Land exercises its option to have exclusive use of the berthing facilities.

Dated: December 20, 1965.

By order of the Federal Maritime Commission.

THOMAS LISI,
Secretary.

[F.R. Doc. 65-13725; Filed, Dec. 22, 1965; 8:47 a.m.]

SECURITIES AND EXCHANGE COMMISSION

[812-1826]

BARBER OIL CORP.

Hearing on Application for Order That Company Is Not Investment Company

DECEMBER 15, 1965.

Notice is hereby given that Barber Oil Corp. ("applicant"), 30 Rockefeller Plaza, New York, N.Y., 10020, a corporation organized and existing under the laws of the State of Delaware, has filed an application pursuant to section 3(b)(2) of the Investment Company Act of 1940 ("Act") for an order of the Commission declaring that it is primarily engaged in a business or businesses other than that of investing, reinvesting, owning, holding, or trading in securities either directly or through majority owned subsidiaries. All interested persons are referred to the application, which is on file with the Commission, for a statement of applicant's representations, which are summarized below.

Section 3(a)(1) of the Act defines an investment company as any issuer which is or holds itself out as being engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, or trading in securities. Section 3(a)(3) of the Act defines an investment company as any issuer which is engaged or proposes to engage in the business of investing, reinvesting, owning, holding or trading in securities, and owns or proposes to acquire investment securities having a value exceeding 40 per centum of the value of such issuer's total assets (exclusive of Government securities and cash items) on an unconsolidated basis. For purposes of section 3(a)(3), "investment securities" include all securities except Government securities, securities issued by employees' securities companies, and securities issued by majority-owned subsidiaries of the owner which are not investment companies. Section 3(b)(2) of the Act provides that, notwithstanding section 3(a)(3), the term "investment company" does not include an issuer which the Commission finds and by order declares to be primarily engaged in a business or businesses other than that of investing, reinvesting, owning, holding, or trading in securities either directly or through majority owned subsidiaries or through controlled companies conducting similar types of businesses.

The table below sets forth a summary of applicant's assets on an unconsolidated basis as of June 30, 1965, on the basis of the values assigned to them by applicant.

	Business	Amount (000 omitted)
Cash		$2,999
Other current assets		72
Total		3,071
Investment securities (at market values)		57,105
Securities of subsidiaries (at applicant's valuations):		
Wholly owned subsidiaries:		
Oil Reserves Corp	Oil and gas	28,298
Sabine Exploration Corp	do	1,125
Trinidad Corp	Tanker operation	10,100
Intercontinent Tankers, Inc	do	4,000
Hercules Tankers Corp	do	2,250
Majority-owned subsidiary:		
American Gilsonite Co.[1]	Gilsonite production and refining.	35,606
Total subsidiaries		[2] 81,379
Airplane and other equipment		50
Total assets		141,605

[1] Applicant owns 50 percent of the outstanding voting securities of this company, and 50 percent is owned by Standard Oil Co. of California.

[2] Carrying value on books of applicant is $20,416,000; underlying book value on subsidiaries' books aggregate $17,088,000.

The investment securities owned by applicant consist of minority interests in various noncontrolled corporations which were valued by applicant at their market values as of June 30, 1965. The values of applicant's holdings of securities of its wholly owned and majority owned subsidiaries are stated by applicant to represent the fair value of such securities in the opinion of the officers of applicant or certain of its affiliates. The application does not set forth the basis upon which such values were determined. However, based on applicant's valuations, investment securities represented 41.2 percent of applicant's total assets (exclusive of Government securities and cash items) as of June 30, 1965.

Applicant asserts that it is primarily engaged, directly or through its wholly owned and majority owned subsidiaries, in (1) the production and sale of crude petroleum and natural gas, (2) the ownership and operation of American and foreign flag marine equipment for the transportation of petroleum and petroleum products, and (3) the mining and marketing of a mineral known as Gilsonite and the refining of Gilsonite to produce premium gasoline, diesel fuel, intermediate oils, asphalt and high grade metallurgical coke.

The following table shows the consolidated net income of applicant and its wholly owned subsidiaries (including and excluding realized gains from sales of securities) plus applicant's equity in the undistributed net income of American Gilsonite Co. (not included in consolidation), and the amounts and percentages thereof derived by applicant from (1) dividends from investment securities, and (2) dividends and realized gains from sales of investment securities. The table also shows separately the realized gains from sales of investment securities.

	000 omitted			
	1962	1963	1964	6 months to June 30, 1965
Net income excluding realized gains	$986	$939	$2,351	$859
Dividends from investment securities	$569	$1,084	$1,260	$637
Percent of net income excluding realized gains	57.7	115.4	53.6	74.2
Net income including realized gains	$991	$1,226	$3,192	$1,005
Dividends and realized gains from investment securities	$574	$1,372	$2,036	$783
Percent of net income including realized gains	57.9	111.8	63.8	77.9
Realized gains from sales of investment securities	$5	$287	$776	$146

It appearing to the Commission that it is appropriate in the public interest and in the interest of investors that a hearing be held with respect to the application:

It is ordered, Pursuant to section 40(a) of the Act, that a hearing on the aforesaid application under the applicable provisions of the Act and of the rules of the Commission thereunder be held on the 12th day of January 1966, at 10 a.m. in the Office of the Securities and Exchange Commission, 425 Second Street NW., Washington, D.C. Any person desiring to be heard or otherwise wishing to participate in this proceeding shall file with the Secretary of the Commission, Washington, D.C., 20549, on or before the 7th day of January 1966, a written request as prescribed by Rule 9 of the Commission's rules of practice. A copy of such request shall be served personally or by mail (airmail if the person being served is located more than 500 miles from the point of mailing) upon applicant at the address noted above, and proof of service (by affidavit or, in case of an attorney at law, by certificate) filed contemporaneously with such request.

It is further ordered, That Sidney Gross, or any officer or officers of the Commission designated by it for that purpose, shall preside at said hearing. The officer so designated is hereby authorized to exercise all the powers granted to the Commission under sections 41 and 42(b) of the Act, and to a hearing officer under the Commission's rules of practice.

The Division of Corporate Regulation having advised the Commission that it has made a preliminary examination of the application and that upon the basis thereof the following matters and questions are presented for consideration, without prejudice to its specifying additional matters and questions upon further examination:

(1) Whether applicant is an investment company within the meaning of section 3(a)(1) or section (3)(a)(3) of the Act;

(2) Whether, under section 3(b)(2) of the Act, applicant is primarily engaged in a business or businesses other than that of investing, reinvesting, owning, holding or trading in securities either directly or through majority owned subsidiaries or through controlled companies conducting similar types of businesses.

It is further ordered, That at the aforesaid hearing attention be given to the foregoing matters.

It is further ordered, That the Secretary of the Commission shall give notice of the aforesaid hearing by mailing copies of this notice and order by registered mail to applicant, and that notice to all persons shall be given by publication of this notice and order in the FEDERAL REGISTER; and that a general release of this Commission in respect of this notice and order be distributed to the press and mailed to the mailing list for releases.

By the Commission.

[SEAL] ORVAL L. DUBOIS,
Secretary.

[F.R. Doc. 65-13683; Filed, Dec. 22, 1965; 8:45 a.m.]

[File No. 1-3393]

VTR, INC.

Order Suspending Trading

DECEMBER 17, 1965.

The common stock, $1 par value, of VTR, Inc., being listed and registered on the American Stock Exchange, pursuant to provisions of the Securities Exchange Act of 1934; and

It appearing to the Securities and Exchange Commission that the summary suspension of trading in such securities on such Exchange and otherwise than on a national securities exchange is required in the public interest and for the protection of investors;

It is ordered, Pursuant to sections 15 (c)(5) and 19(a)(4) of the Securities Exchange Act of 1934, that trading in such securities on the American Stock Exchange and otherwise than on a national securities exchange, be summarily suspended, this order to be effective for the period December 18, 1965, through December 27, 1965, both dates inclusive.

By the Commission.

[SEAL] ORVAL L. DUBOIS,
Secretary.

[F.R. Doc. 65-13684; Filed, Dec. 22, 1965; 8:45 a.m.]

INTERSTATE COMMERCE COMMISSION

[Notice 859]

MOTOR CARRIER, BROKER, WATER CARRIER AND FREIGHT FORWARDER APPLICATIONS

December 17, 1965.

The following applications are governed by Special Rule 1.247[1] of the Commission's general rules of practice (49 CFR 1.247), published in the Federal Register, issue of December 3, 1963, effective January 1, 1964. These rules provide, among other things, that a protest to the granting of an application must be filed with the Commission within 30 days after date of notice of filing of the application is published in the Federal Register. Failure seasonably to file a protest will be construed as a waiver of opposition and participation in the proceeding. A protest under these rules should comply with § 1.40 of the general rules of practice which requires that it set forth specifically the grounds upon which it is made and specify with particularity the facts, matters, and things relied upon, but shall not include issues or allegations phrased generally. Protests not in reasonable compliance with the requirements of the rules may be rejected. The original and six (6) copies of the protest shall be filed with the Commission, and a copy shall be served concurrently upon applicant's representative, or applicant if no representative is named. If the protest includes a request for oral hearing, such request shall meet the requirements of § 1.247(d)(4) of the special rule. Subsequent assignment of these proceedings for oral hearing, if any, will be by Commission order which will be served on each party of record.

The publications hereinafter set forth reflect the scope of the applications as filed by applicants, and may include descriptions, restrictions, or limitations which are not in a form acceptable to the Commission. Authority which ultimately may be granted as a result of the applications here noticed will not necessarily reflect the phraseology set forth in the application as filed, but also will eliminate any restrictions which are not acceptable to the Commission.

No. MC 409 (Sub-No. 26), filed December 2, 1965. Applicant: O. E. POULSON, INC., Post Office Box 295, Elm Creek, Nebr. Applicant's representative: J. Max Harding, Box 2028, Lincoln, Nebr., 68501. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Animal fats and oils and blends thereof*, in bulk, in tank vehicles, from Phelps City, Mo., to points in Arkansas, Iowa, Kansas, Missouri, Nebraska, and points in East St. Louis, Ill., commercial zone. Note: If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 906 (Sub-No. 48), filed November 29, 1965. Applicant: CONSOLIDATED FORWARDING CO., INC., 1300 North 10th Street, St. Louis, Mo., 63106. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts*, and *articles distributed by meat packinghouses*, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766, from Fort Worth, Tex., and Clovis, N. Mex., to points in Connecticut, Delaware, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 906 (Sub-No. 49), filed December 2, 1965. Applicant: CONSOLIDATED FORWARDING CO., INC., 1300 North 10th Street, St. Louis, Mo., 63106. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts, dairy products*, and *articles distributed by meat packinghouses*, as described in sections A, B, and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766, from Wichita, Kans., to points in Arkansas, Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia. Note: If a hearing is deemed necessary, applicant requests it be held at Wichita, Kans.

No. MC 906 (Sub-No. 50), filed December 2, 1965. Applicant: CONSOLIDATED FORWARDING CO., INC., 1300 North 10th Street, St. Louis, Mo. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meat, meat products, meat byproducts* and *articles distributed by meat packinghouses*, from Worthington and Mankato, Minn., to points in Arkansas, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 2202 (Sub-No. 286), filed Novvember 29, 1965. Applicant: ROADWAY EXPRESS, INC., 1077 Gorge Boulevard, Arkron, Ohio. Applicant's representative: William O. Turney, 2001 Massachusetts Avenue NW., Washington, D.C., 20036. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, livestock, household goods as defined by the Commission, commodities in bulk, and those requiring special equipment), between Savannah, Ga., and Charleston, S.C., from Savannah over U.S. Highway 17A to junction U.S. Highway 17, thence over U.S. Highway 17 to Charleston, and return over the same route, serving no intermediate points, as an alternate route for operating convenience only in connection with carrier's authorized regular route operations. Note: If a hearing is deemed necessary, applicatnt requests it be held at Washington, D.C., or Columbia, S.C.

No. MC 8948 (Sub-No. 64) (Amendment), filed October 11, 1965, published in Federal Register, issue of November 4, 1965, amended December 10, 1965, and republished as amended this issue. Applicant: WESTERN GILLETTE, INC., 2550 East 28th Street, Post Office Box 15274, Vernon Station, Los Angeles, Calif., 90058. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Liquefied helium*, in bulk, in specially designed tank trailers (dewars), between points in Alabama, California, Ohio, Texas, Florida, Mississippi, Louisiana, New Mexico, and New York. Note: The purpose of this republication is to clarify the type of tank truck equipment to be used and to add additional territory. If a hearing is deemed necessary, applicant requests it be held at Cleveland, Ohio.

No. MC 11899 (Sub-No. 16), filed December 2, 1965. Applicant: STEVENS TRUCK LINES, INC., 893 Ridge Road, Webster, N.Y., 14580. Applicant's representative: Raymond A. Richards, 35 Curtice Park, Webster, N.Y., 14580. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Canned and preserved foodstuffs*, from Batavia, N.Y., to Baltimore, Bethesda, and Landover, Md., and the District of Columbia. Note: If a hearing is deemed necessary, applicant requests it be held at Rochester, N.Y.

No. MC 19227 (Sub-No. 99), filed December 1, 1965. Applicant: LEONARD BROS. TRANSFER, INC., 2595 Northwest 20th Street, Miami, Fla., 33142. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Commodities* which do not require the use of special equipment when moving in the same shipment or same vehicle with commodities which require the use of special equipment because of size or weight, between points in Florida, on the one hand, and, on the other, points in Connecticut, Delaware, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia. Note: Applicant states that the above is an extension of the authority held in

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[1] Copies of Special Rule 1.247 can be obtained by writing to the Secretary, Interstate Commerce Commission, Washington, D.C., 20423.

MC-19227, Sub-No. 32. (2) *Commodities* which do not require the use of special equipment when moving in the same shipment or same vehicle with commodities requiring the use of special equipment or special handling because of size or weight, between points in Florida, on the one hand, and, on the other, points in Alabama, Georgia, and South Carolina. NOTE: Applicant states that the above is an extension of the authority held in MC-19227, Sub-No. 32. (3) *Commodities* which do not require the use of special equipment when moving in the same shipment or same vehicle with commodities which require the use of special equipment because of size or weight, between points in Florida.

NOTE: Applicant states that the above is an extension of the authority held in MC 19227, Sub-No. 38. (4) *Commodities* which do not require the use of special equipment or special handling when moving in the same shipment or same vehicle with commodities requiring the use of special equipment or special handling because of size or weight, between points in Florida, on the one hand, and, on the other, points in Texas. NOTE: Applicant states that the above is an extension of authority held in MC 19227, Sub-No. 43. (5) *Commodities* which do not require special handling or rigging when moving in the same shipment or same vehicle with commodities requiring the use of special equipment or special handling because of size or weight, (a) between points in Kansas, Missouri, Nebraska, New Mexico, and Oklahoma and (b) between points in Kansas, Missouri, Nebraska, New Mexico, and Oklahoma, on the one hand, and, on the other, points in Texas. NOTE: Applicant states that the above is an extension of authority held in MC 19227, Sub-No. 75. Authority is also sought to tack all the authorities sought with each other and with other authorities presently held. If a hearing is deemed necessary, applicant requests that it be held at Washington, D.C.

No. MC 21170 (Sub-No. 128), filed November 24, 1965. Applicant: BOS LINES, INC., 408 South 12th Avenue, Marshalltown, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuff*, from Vineland, N.J., to points in Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, New York, Ohio, Pennsylvania, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 21170 (Sub-No. 129), filed November 24, 1965. Applicant: BOS LINES, INC., 408 South 12th Avenue, Mashalltown, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Food products*, and (2) *commodities*, the transportation of which is partially exempt under the provisions of section 203(b)(6) of the Interstate Commerce Act if transported in vehicles not used in carrying any other property, when moving in the same vehicle at the same time with food products, from the plantsite of the Ralston Purina Co. located at or near California, Mo., to points in Alabama, Florida, Georgia, North Carolina, South Carolina, and Tennessee (except Memphis, Tenn., and points in its commercial zone). NOTE: If a hearing is deemed necessary, applicant requests it be held at Miami, Fla., or Washington, D.C.

No. MC 21170 (Sub-No. 130), filed December 6, 1965. Applicant: BOS LINES, INC., 408 South 12th Avenue, Marshalltown, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts*, and *articles distributed by meat packinghouses*, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766, from Schuyler, Nebr., to points in Colorado, California, Washington, Oregon, Arizona, Idaho, and Utah, restricted to traffic originating at the plantsite and storage facilities utilized by Spencer Packing Co., located at or near Schuyler, Nebr. NOTE: If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 21170 (Sub-No. 131), filed December 6, 1965. Applicant: BOS LINES, INC., 408 South 12th Avenue, Marshalltown, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts*, and *articles distributed by meat packinghouses*, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766, from Schuyler, Nebr., to points in Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia, restricted to traffic originating at the plantsite and storage facilities utilized by Spencer Packing Co., located at or near Schuyler, Nebr. NOTE: If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 21170 (Sub-No. 132), filed December 6, 1965. Applicant: BOS LINES, INC., 408 South 12th Avenue, Marshalltown, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Building, paving and roofing materials*, from Wilmington, Ill., to points in Missouri. NOTE: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 21866 (Sub-No. 56), filed December 10, 1965. Applicant: WEST MOTOR FREIGHT, INC., 740 South Reading Avenue, Boyertown, Pa., 19512. Applicant's representative: Paul Coyle, 5631 Utah Avenue NW., Washington, D.C., 20015. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Metal articles*, from Leesport and Trappe, Pa., to Pottsville, Pa. NOTE: Applicant states it intends to tack the above proposed authority with its existing authority in Certificates Nos. MC 21866 Subs 40, 41, 42, 49, 52, and 54, wherein applicant is authorized to serve points in Alabama, Arkansas, Colorado, Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Mississippi, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin. If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 29929 (Sub-No. 5), filed November 22, 1965. Applicant: CANNY TRUCKING CO., INC., 6-18 Spring Forest Avenue, Binghamton, N.Y., 13905. Applicant's representative: Donald C. Carmien, 300 Press Building, Binghamton, N.Y., 13902. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except commodities in bulk, those requiring special equipment, those of unusual value, classes A and B explosives and household goods as defined by the Commission), serving points in Dutchess, Putnam, and Westchester Counties, N.Y., and Kingston and Poughkeepsie, N.Y., as off-route points in connection with applicant's authorized regular-route operations between Painted Post, N.Y., and New York, N.Y., restricted to traffic to and from points on regular-route authority outside of the New York, N.Y., commercial zone as defined by the Commission, as follows: From Clifton, N.J., over New Jersey Highway 46 to junction New Jersey Highway 17, thence over New Jersey Highway 17 to the New Jersey-New York State line, thence over New York Highway 17 to junction Interstate Highway 87, thence over Interstate Highway 87 to Kingston, N.Y.; also over same route from New York Highway 17 to junction New York Highway 9W, thence over New York Highway 9W to junction New York Highway 28, thence over New York Highway 28 to Kingston, N.Y.; also over any combination of above routes to use all bridges across the Hudson from the George Washington Bridge, New York, N.Y., to Kingston, N.Y., for purposes of serving points in Dutchess, Putnam, and Westchester Counties, N.Y., with no service to or from points along these routes, except as specified above. NOTE: If a hearing is deemed necessary, applicant requests it be held at Binghamton, N.Y.

No. MC 29934 (Sub-No. 14) (Amendment), filed November 5, 1965, published in FEDERAL REGISTER issue of November 25, 1965, amended December 7, 1965, and republished as amended, this issue. Applicant: LO BIONDO BROTHERS MOTOR EXPRESS, INC., Post Office Box 18, Bridgeton, N.J. Applicant's representative: Charles H. Trayford, 220 East 42d Street, New York 17, N.Y. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Canned goods*, from points in Burlington, Mercer, and Union Counties, N.J., to points in Delaware, Connecticut, Maryland, Massachusetts, New York, Pennsylvania, Rhode Island, Virginia, and the District of Columbia. NOTE: The purpose of this republication is to add the State of Virginia to the destination territory. If a hearing is deemed necessary, applicant requests it be held at Newark, N.J.

No. MC 30867 (Sub-No. 175), filed December 2, 1965. Applicant: CENTRAL FREIGHT LINES, INC., 303 South 12th Street, Waco, Tex. Applicant's representative: Phillip Robinson, 721 Brown Building, Austin, Tex., 78701. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting:

General commodities (except those of unusual value, household goods as defined by the Commission, commodities in bulk, and those requiring special equipment), (1) between Freeport and Texas City, Tex.; from Freeport over Texas Highway 288 to junction Farm-to-Market Road 2004, thence over Farm-to-Market Road 2004 to junction Texas Highway 6 at or near Hitchcock, Tex., thence over Farm-to-Market Road 519 to junction Texas Highway 341, thence over Texas Highway 341 to junction Loop 197, and thence over Loop 197 to Texas City, and return over the same route, serving all intermediate points, (2) between Freeport and Galveston, Tex.; from Freeport over Texas Highway 288 to junction Farm-to-Market Road 2004, thence over Farm-to-Market Road 2004 to junction Texas Highway 6 at or near Hitchcock, Tex., thence over Texas Highway 6 to junction U.S. Highway 75, and thence over U.S. Highway 75 to Galveston, and return over the same route, serving all intermediate points, and (3) between Freeport, Tex., and the San Luis Pass Bridge and causeway construction site (located on Galveston Island approximately 25 miles southwest of Galveston, Tex.); from Freeport over County Road 257, commonly known as San Luis Beach Road to the San Luis Pass Bridge and causeway construction site and return over the same route, serving all intermediate points. NOTE: Applicant states no duplicate authority is sought. If a hearing is deemed necessary, applicant requests it be held at Houston, Tex.

No. MC 31600 (Sub-No. 603), filed November 28, 1965. Applicant: P. B. MUTRIE MOTOR TRANSPORTATION, INC., Calvary Street, Waltham, Mass., 02154. Applicant's representative: H. C. Ames, Jr., Transportation Building, Washington, D.C., 20006. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dry plastic*, in bulk, in tank or hopper type vehicle, from Gales Ferry, Conn., to Federalsburg, Md. NOTE: If a hearing is deemed necessary, applicant does not specify a particular location.

No. MC 35320 (Sub-No. 87), filed December 2, 1965. Applicant: T. I. M. E. FREIGHT, INC., 2598 74th Street, Post Office Box 1120, Lubbock, Tex. Applicant's representatives: Frank M. Garrison (same address as applicant) and W. S. Benson, Jr., Ninth Floor Citizens Tower, Lubbock, Tex. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except classes A and B explosives, livestock, articles of unusual value, commodities in bulk, and those requiring special equipment), between Memphis, Tenn., and Atlanta, Ga., as follows: From Memphis, Tenn., over U.S. Highway 72 to Tuscumbia, Ala., thence over U.S. Highway 72 to junction Alabama Highway 35 near Scottsboro, Ala., thence over Alabama Highway 35 to Fort Payne, Ala., thence over Alabama Highway 35 to junction Alabama Highway 9, thence over Alabama Highway 9 to Alabama-Georgia State line, thence over Georgia Highway 20 to Rome, Ga., thence over U.S. Highway 41 to Cass, Ga., thence over U.S. Highway 41 to Atlanta, Ga., and return over the same route, serving no intermediate points, tacking for purposes of joinder only at Memphis, Tenn., Tuscumbia and Fort Payne, Ala., and Cass and Atlanta, Ga., as an alternate route for operating convenience only. Applicant states that it seeks no duplicating authority. Restriction: The service authorized herein shall be restricted so as to preclude the transportation of traffic originating or destined to points in Alabama. NOTE: If a hearing is deemed necessary, applicant requests it be held at Memphis, Tenn., or Atlanta, Ga.

No. MC 42688 (Sub-No. 6), filed November 23, 1965. Applicant: JOHN WELLER SCHROCK, doing business as SCHROCK TRANSFER, 234 West Patriot Street, Somerset, Pa., 15501. Applicant's representative: James O. Courtney, 142 North Court Avenue, Somerset, Pa., 15501. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods, and commodities requiring special equipment), moving under bills of lading and tariffs, in trailer-on-flatcar operation of the Baltimore and Ohio Railroad Co., between its terminals in the city of Pittsburgh, Pa., on the one hand, and, on the other, its terminals and other points in Somerset County, Pa., with the following restrictions: (1) The proposed service by motor vehicle to be performed by carrier shall be limited to service which is auxiliary to or supplemental of the trailer-on-flatcar operations of the Baltimore and Ohio Railroad Co., (2) shipments transported by carrier shall be limited to those which move under a through railroad bill of lading and under a railroad tariff from points of origin to points of destination, and (3) shipments transported by carrier shall be restricted to those having an immediately prior or immediately subsequent movement by rail in trailer-on-flatcar operations of the Baltimore and Ohio Railroad Co. NOTE: If a hearing is deemed necessary, applicant requests it be held at Pittsburgh, Pa.

No. MC 52579 (Sub-No. 47), filed December 1, 1965. Applicant: GILBERT CARRIER CORP., 441 Ninth Avenue, New York, N.Y. Applicant's representative: Harris J. Klein, 280 Broadway, New York, N.Y., 10007. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Wearing apparel* on hangers, from Racine, Wis., to Chicago, Ill., and *returned wearing apparel*, on return. NOTE: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 52579 (Sub-No. 48), filed December 1, 1965. Applicant: GILBERT CARRIER CORP., 441 Ninth Avenue, New York, N.Y. Applicant's representative: Harris J. Klein, 280 Broadway, New York, N.Y., 10007. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Wearing apparel* on hangers from Cleveland, Ohio, to points in California, and *returned wearing apparel*, on return. NOTE: If a hearing is deemed necessary, applicant requests it be held at New York, N.Y.

No. MC 52657 (Sub-No. 642) (Correction), filed November 15, 1965, published in FEDERAL REGISTER, issue of December 2, 1965, and republished this issue, as corrected. Applicant: ARCO AUTO CARRIERS, INC., 2140 West 79th Street, Chicago, Ill., 60620. Applicant's representative: A. J. Bieberstein, 121 West Doty Street, Madison, Wis., 53703. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Automobiles*, in secondary movements, by the truckaway method, restricted to the transportation of vehicles manufactured or assembled at the site of the plant of American Motors (Canada) Ltd., in Brampton, Ontario, Canada, (1) from Buffalo, N.Y., and points within 20 miles thereof, to points in New York and Pennsylvania; (2) from Little Ferry, N.J., and points within 20 miles thereof, to points in Connecticut, New Jersey, New York, and Rhode Island; (3) from Selkirk, N.Y., and points within 20 miles thereof, to points in Connecticut, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont; and (4) from Framingham, Mass., and points within 20 miles thereof, to points in Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island. NOTE: The purpose of this republication is to correct the location of Little Ferry, located in the State of New Jersey. If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 52751 (Sub-No. 52) (Amendment), filed October 20, 1965, published in FEDERAL REGISTER issue of November 4, 1965, and republished as amended November 11, 1965, and further amended December 13, 1965, and republished as further amended this issue. Applicant: ACE LINES, INC., 4143 East 43d Street, Des Moines, Iowa, 50317. Applicant's representative: William A. Landau, 1307 East Walnut Street, Des Moines, Iowa, 50306. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Agricultural machinery*, (2) *self-propelled loaders*, and (3) *attachments and parts* of the above-named commodities, when moving in mixed loads with the above-named commodities, from the plantsites and warehouses of Owatonna Manufacturing Co., located at Owatonna, Minn., and points within 3 miles thereof, to Omaha, Nebr., and points in Illinois, Iowa, Minnesota, North Dakota, and South Dakota. NOTE: The purpose of this republication is to more clearly set forth the commodity and territory descriptions. If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill., Madison, Wis., or Minneapolis, Minn.

No. MC 55236 (Sub-No. 119), filed December 1, 1965. Applicant: OLSON TRANSPORTATION COMPANY, a corporation, 1970 South Broadway, Post Office Box 1187, Green Bay, Wis., 54304. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Animal fats and oils*, and *tallow*, in bulk, in tank vehicles, from Cedar Rapids, Iowa, to points in Illinois. NOTE: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 59934 (Sub-No. 5), filed November 24, 1965. Applicant: MAIN TRUCKING & RIGGING CO., INC., 21 Camden Street, Paterson, N.J. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Commodities*, the transportation of which do not require the use of special equipment when moving in the same shipment or in the same vehicle with commodities, the transportation of which because of size or weight require the use of special equipment, between points in Connecticut, Rhode Island, Massachusetts, New York, and New Jersey. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 61396 (Sub-No. 148), filed December 2, 1965. Applicant: HERMAN BROS., INC., 2501 North 11th Street, Omaha, Nebr. Applicant's representative: Donald L. Stern, 630 City National Bank Building, Omaha, Nebr. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Chemicals*, including but not limited to nitrogen fertilizer solutions, in bulk, in tank trucks, from the site of Cordova Industrial Park, Ill., to points in Iowa, Minnesota, Missouri, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 61592 (Sub-No. 60), filed December 1, 1965. Applicant: JENKINS TRUCK LINE, INC., 3708 Elm Street, Bettendorf, Iowa, 52722. Applicant's representative: Val M. Higgins, 1000 1st National Bank Building, Minneapolis, Minn., 55402. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Building board, wall board, insulation board* and *laminated flakeboard*, finished or not finished, with or without decorative or protective coating, and *accessories* and *supplies* used in the installation thereof, from Union, Mo., to points in Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Ohio, Pennsylvania, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant does not specify a location.

No. MC 64112 (Sub-No. 27), filed December 1, 1965. Applicant: NORTHEASTERN TRUCKING COMPANY, a corporation, 2508 Starita Road, Charlotte, N.C. Applicant's representative: W. Delbert Turner, Sr., 1415 East Boulevard, Post Office Box 3661, Charlotte, N.C., 28203. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Textiles*, truckload, from Clarksville, Ga., to Fall River, Mass., and points in the New York, N.Y., commercial zone, as defined by the Commission. NOTE: If a hearing is deemed necessary, applicant requests it be held at Charlotte, N.C.

No. MC 64932 (Sub-No. 391), filed November 28, 1965. Applicant: ROGERS CARTAGE CO., a corporation, 1439 West 103d Street, Chicago, Ill., 60643. Applicant's representative: David Axelrod, 39 South La Salle Street, Chicago, Ill. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fertilizer and fertilizer materials*, in bulk, from Wawaka, Ind., to points in Michigan and Ohio. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 65626 (Sub-No. 13), filed December 6, 1965. Applicant: FREDONIA EXPRESS, INC., Post Office Box 222, Fredonia, N.Y. Applicant's representative: E. Stephen Heisley, Transportation Building, Washington, D.C., 20006. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Canned and preserved foodstuffs*, from North East, Pa., to Fredonia, N.Y. NOTE: If a hearing is deemed necessary, applicant requests it be held at Buffalo, N.Y.

No. MC 68539 (Sub-No. 20), filed December 2, 1965. Applicant: ROMANS MOTOR FREIGHT, INC., Ord, Nebr. Applicant's representative: J. Max Harding, Post Office Box 2028, Lincoln, Nebr., 68501. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Plastic articles* (other than foam, cellular or expanded) from Montgomery, Pa., to Columbus and Broken Bow, Nebr., and (2) *glass tubing*, from Vineland, N.J., to Columbus and Broken Bow, Nebr. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 69833 (Sub-No. 81), filed December 1, 1965. Applicant: ASSOCIATED TRUCK LINES, INC., 15 Andre Street SE., Grand Rapids 7, Mich. Applicant's representative: Walter N. Bieneman, Suite 1700, 1 Woodward Avenue, Detroit, Mich., 48226. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods as defined by the Commission, commodities requiring special equipment, and those injurious or contaminating to other lading), between Gary, Ind., and Sawyer, Mich., from Gary over Interstate Highway 90 to junction Indiana Highway 39, thence over Indiana Highway 39 to Indiana-Michigan State line, thence over Michigan Highway 239 to junction Interstate Highway 94, thence over Interstate Highway 94 to Sawyer, and return over the same route, serving no intermediate points, and serving the junction Indiana Highway 39 and U.S. Highway 20 and junction Michigan Highway 239 and U.S. Highway 12 for joinder only. NOTE: If a hearing is deemed necessary, applicant requests it be held at Lansing, Mich.

No. MC 73464 (Sub-No. 99), filed November 29, 1965. Applicant: JACK COLE COMPANY, a corporation, 1900 Vanderbilt Road, Post Office Box 294, Birmingham, Ala. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods as defined by the Commission, commodities in bulk, commodities requiring special equipment, and those injurious to other lading), between Anniston, Birmingham, Gadsden, Mobile, Mongomery, Opelika, and Selma, Ala., on the one hand, and, on the other, Phoenix and Tucson, Ariz.; Crossett, Fort Smith, Little Rock, Monticello, Pine Bluff, and Springdale, Ark.; Denver, Colo.; Jacksonville, Miami, Pensacola, Tallahassee, and Tampa, Fla.; Albany and Waycross, Ga.; Kansas City, Topeka, and Wichita, Kans.; Monroe and Shreveport, La.; Baltimore, Md.; Boston, Mass.; Bridgeport and Hartford, Conn.; Joplin, Kansas City, Springfield, and St. Joseph, Mo.; Buffalo and Rochester, N.Y.; Asheville, Charlotte, Cherryville, Greensboro, and Hickory, N.C.; Oklahoma City and Tulsa, Okla.; Erie, Harrisburg, Pittsburgh, and York, Pa.; Providence, R.I.; Charleston and Greenville, S.C.; Norfolk and Richmond, Va.; Abilene, Beaumont, Dallas, Fort Worth, Houston, San Antonio, and Waco, Tex. NOTE: If a hearing is deemed necessary, applicant requests it be held at Birmingham, Ala.

No. MC 73165 (Sub-No. 209), filed December 3, 1965. Applicant: EAGLE MOTOR LINES, INC., 830 North 33d Street, Post Office Box 1348, Birmingham, Ala., 35201. Applicant's representative: Robert E. Tate, 2031 9th Avenue South, Birmingham, Ala. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Meats, meat products, meat byproducts*, and *articles distributed by meat packinghouses*, as described in appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except commodities in bulk, in tank vehicles), (2) *frozen foods*, (3) *canned and preserved foods*, (4) *chemicals, chemical blends, and ingredients*, to be used in further manufacturing processes, transportation of which does not require special equipment or bulk or tank vehicles, (5) *inedible meats, meat products, and meat byproducts, lard, tallows, and oils*, (6) *agricultural products* and those *commodities* embraced in section 203(b)(6) of Part II of the Interstate Commerce Act, when moving in the same vehicle with economically regulated commodities, (7) *frozen animal and poultry foods*,

(8) *industrial products*, in packages, requiring refrigeration, and (9) *coffee*, condensed, *coffee extracts*, *coffee*, *green tea* and *tea dust and sugar*, from Gulfport, Miss., to points in Mississippi, Alabama, Tennessee, Georgia, Kentucky, Illinois, Indiana, Ohio, Iowa, Kansas, Missouri, Virginia, Wisconsin, Michigan, and Arkansas. NOTE: If a hearing is deemed necessary, applicant requests it be held at New Orleans, La.

No. MC 73165 (Sub-No. 210), filed December 3, 1965. Applicant: EAGLE MOTOR LINES, INC., Post Office Box 1348, Birmingham, Ala. Applicant's representative: Robert E. Tate, 2031 Ninth Avenue South, Birmingham, Ala. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, in vehicles equipped with mechanical refrigeration, from points in George, Hinds, Rankin, Copiah, Greene, Union, Madison, and Covington Counties, Miss., to points in Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant requests it be held at Jackson, Miss.

No. MC 74857 (Sub-No. 19), filed December 1, 1965. Applicant: FULLER MOTOR DELIVERY CO., a corporation, 802 Plum Street, Cincinnati, Ohio, 45202. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Salt*, in dump vehicles, limited to service to be performed under continuing contracts with Cargill, Inc., from points in Washington County, Ohio, to points in Ohio and points in West Virginia on and west of U.S. Highway 219. NOTE: If a hearing is deemed necessary, applicant requests it be held at Columbus, Ohio.

No. MC 75185 (Sub-No. 260), filed November 26, 1965. Applicant: SERVICE TRUCKING CO., INC., Post Office Box 276, Federalsburg, Md., 21632. Applicant's representative: James W. Lawson, 1000 16th Street NW., Washington, D.C., 20036. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen foods*, from Elmira, N.Y., to points in Alabama, Connecticut, Delaware, Florida, Georgia, Maryland, Massachusetts, New Jersey, North Carolina, Rhode Island, South Carolina, Tennessee, Virginia, the District of Columbia, and New York City, N.Y. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 75330 (Sub-No. 12), filed September 24, 1965. Applicant: MORRIS DRAYING COMPANY, a corporation, 190 98th Avenue, Oakland, Calif. Applicant's representative: Daniel W. Baker, 625 Market Street, San Francisco 5, Calif. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities*, (1) between San Francisco and Salinas, Calif.; from San Francisco over U.S. Highway 101 to junction U.S. Highway 101 By-Pass, and thence over U.S. Highway 101 By-Pass to Salinas, (2) between Salinas and Monterey, Calif., over California Highway 68, (3) between Watsonville and Monterey, Calif., over California Highway 1, (4) between Redding and Kingsburg, Calif.; from Redding over U.S. Highway 99 to junction U.S. Highway 99E (also over U.S. Highway 99 to junction U.S. Highway 99W), and thence over U.S. Highway 99E to junction U.S. Highway 99 (also over U.S. Highway 99W to junction U.S. Highway 99) and thence over U.S. Highway 99 to Kingsburg, (5) between Williams and Marysville, Calif., over California Highway 20, (6) between San Francisco and Sacramento, Calif., over U.S. Highway 40 (7) between Davis and Oroville, Calif.; from Davis over U.S. Highway 40 to junction California Highway 113.

Thence over California 113 to Yuba City, and thence over California Highway 70 to Oroville, (8) between San Francisco and Stockton, Calif., over U.S. Highway 50, (9) between junction U.S. Highway 40 near Fairfield, Calif., and junction U.S. Highway 99, near Lodi, Calif., over California Highway 12, (10) between Oakland and Oroville, Calif.; from Oakland over California Highway 24 to junction Interstate Highway 680 at Walnut Creek, Calif., thence over Interstate Highway 680 to junction U.S. Highway 40, thence over U.S. Highway 40 to junction U.S. Highway 99E at Roseville, Calif., thence over U.S. Highway 99E to Marysville, Calif., and thence over California Highway 70 to Oroville, (11) between junction California Highway 4 and U.S. Highway 40, near Pinole, Calif., and Stockton, Calif., over California Highway 4, (12) between junction California Highway 33 and U.S. Highway 50, near Tracy, Calif., and junction California Highway 180, near Mendota, Calif., over California Highway 33, (13) between junction California Highways 33 and 180 and Fresno, Calif., over California Highway 180, (14) between Watsonville, Calif., and junction U.S. Highway 99, near Califa, Calif., over California Highway 152, (15) between Vernalis and Modesto, Calif., over California Highway 132, and (16) between Gustine and Merced, Calif., over California Highway 140, serving all intermediate points in (1) through (16) above, and the off-route point of Hollister, Calif. in (1) above.

NOTE: Applicant states it does not propose to transport any shipments of the following: (a) Used household goods and personal effects not packed in accordance with the crated property reqirements, (b) automobiles, trucks and buses, namely, new and used, finished or unfinished passenger automobiles (including jeeps), ambulances, hearses and taxis, freight automobiles, automobile chassis, trucks, truck chassis, truck trailers, trucks and trailers combined, buses and bus chassis, (c) livestock, (d) commodities requiring the use of special refrigeration or temperature control in specially designed and constructed refrigerator equipment, (e) liquids, compressed gases, commodities in semiplastic form and commodities in suspension in liquids in bulk, in tank trucks, tank trailers, tank semitrailers or a combination of such highway vehicles, (f) commodities when transported in bulk in dump trucks or in hopper type trucks, (g) commodities when transported in motor vehicles equipped for mechanical mixing in transit, (h) fruits, fresh or green (not cold pack or frozen) and vegetables, fresh or green (not cold pack or frozen), including mushrooms, fresh, when the point of destination is a cannery, accumulation station, cold storage plant, precooling plant or winery, and (i) metal cans or can tops, bottoms or ends. If a hearing is deemed necessary, applicant requests it be held at San Francisco, Calif.

No. MC 76032 (Sub-No. 201), filed December 1, 1965. Applicant: NAVAJO FREIGHT LINES, INC., 1205 South Platte River Drive, Denver, Colo., 80223. Applicant's representative: Ken Wolford, 1205 South Platte River Drive, Denver, Colo., 80223. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *Classes A and B explosives* (ammunition not included in classes A, B, and C, explosives), *and component parts of explosives and ammunition*, (a) from Denver, Colo., over combined Interstate Highway 25 and U.S. Highway 87 to junction U.S. Highway 30 located at or near Cheyenne, Wyo., thence over U.S. Highway 30 to junction U.S. Highway 30S located at or near Little America, Wyo., and (b) from Denver, over combined Interstate Highway 25 and U.S. Highway 87 to junction Colorado Highway 14 approximately four (4) miles east of Fort Collins, Colo., thence over Colorado Highway 14 to junction U.S. Highway 287 at or near Fort Collins, thence over U.S. Highway 287 to junction U.S. Highway 30 at or near Laramie, Wyo., and thence over U.S. Highway 30 to junction U.S. Highway 30S at or near Little America, Wyo., thence over U.S. Highway 30S to junction U.S. Highway 189 located at or near Echo, Utah, thence over U.S. Highway 189 to junction U.S. Highway 40 at or near Kimball Junction, Utah, thence over U.S. Highway 40 to Sacramento, Calif., and thence over U.S. Highway 99 to Manteca, Calif., and return over the same route, serving no intermediate points, as an alternate route for operating convenience only in connection with applicant's authorized regular route operations. NOTE: Applicant states "the routes described immediately above shall be applicable only in connection with the transportation of traffic moving for the account of the U.S. Government and further restricted to the transportation of west bound traffic only." If a hearing is deemed necessary, applicant requests it be held at Denver, Colo.

No. MC 76032 (Sub-No. 202), filed December 3, 1965. Applicant: NAVAJO FREIGHT LINES, INC., 1205 South Platte River Drive, Denver, Colo., 80223. Applicant's representative: O. Russell Jones, 207 Bokum Building, 142 West Palace Avenue, Santa Fe, N. Mex., 87501. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Iron and steel articles* (except oilfield equipment, materials and supplies), between Pueblo and Minnequa, Colo., on the one hand, and, on the other, points in Arizona, California, Illinois, Indiana, Iowa, Kansas, Missouri, Nebraska, Nevada, New Mexico, and Wisconsin. Note: If a hearing is deemed necessary, applicant requests it be held at Denver, Colo.

No. MC 78042 (Sub-No. 17), filed December 1, 1965. Applicant: BEAROFF BROTHERS, INC., Post Office Box 21, Bridgeport, Pa. Applicant's representative: Morris J. Winokur, Suite 1920, 2 Penn Center Plaza, John F. Kennedy Boulevard at 15th Street, Philadelphia, Pa., 19102. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Scrap metal, commodities containing scrap metal, and metals processed therefrom*, between Swedeland, Pa., on the one hand, and, on the other, points in Rhode Island, Maine, Massachusetts, Connecticut, New Jersey, and Philadelphia, Pa. Note: If a hearing is deemed necessary, applicant requests it be held at Philadelphia, Pa.

No. MC 80430 (Sub-No. 114), filed December 2, 1965. Applicant: GATEWAY TRANSPORTATION CO., INC., 2130-2150 South Avenue, La Crosse, Wis. Applicant's representative: David Axelrod, 39 South La Salle Street, Chicago, Ill. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Iron and steel* and *iron and steel articles*, between points in Pennsylvania, Ohio, West Virginia, Indiana, Illinois, Wisconsin, and Michigan. Note: If a hearing is deemed necessary, applicant requests it be held at Pittsburgh, Pa.

No. MC 83539 (Sub-No. 166), filed December 6, 1965. Applicant: C & H TRANSPORTATION CO., INC., 1935 West Commerce Street, Post Office Box 5976, Dallas, Tex., 75222. Applicant's representative: W. T. Brunson, 419 Northwest 6th Street, Oklahoma City, Okla. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Trucks or truck tractors*, with or without cabs or bodies, including special equipment attached thereto, in initial movements, in driveaway and truckaway service, from Augusta, Kans., and Brady, Tex., to points in the United States, except Hawaii and Alaska: Note: If a hearing is deemed necessary, applicant requests it be held at Dallas, Tex.

No. MC 83745 (Sub-No. 3), filed November 29, 1965. Applicant: STEEL CITY TRANSPORT, INC., 2034 Chateau Street, Pittsburgh, Pa., 15219. Applicant's representative: Owen B. McManus, Grant Building, Pittsburgh, Pa., 15219. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Articles of iron and steel, iron and steel manufacture and machinery*, between points in Allegheny, Beaver, and Washington Counties, Pa., on the one hand, and, on the other points in Illinois, Indiana, and the Lower Peninsula of Michigan. Note: If a hearing is deemed necessary, applicant requests it be held at Pittsburgh, Pa.

No. MC 87720 (Sub-No. 44), filed November 30, 1965. Applicant: BASS TRANSPORTATION CO., INC., Star Route A, Old Croton Road, Flemington, N.J. Applicant's representative: Bert Collins, 140 Cedar Street, New York, N.Y., 10006. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: (1) *Linoleum*, in rolls, from Lisbon, Maine, to Hamilton Township (Mercer County), N.J., (2) *asbestos felt fiber and asbestos folding paper*, in containers, from Norristown, Pa., to Lisbon, Maine, and (3) plastic granules, in containers, from Pottstown, Pa., to Lisbon, Maine, restricted under contract with American Biltrite Rubber Co., Inc. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 89369 (Sub-No. 13), filed December 6, 1965. Applicant: JOART TRUCKING CO., a corporation, Post Office Box 332, New Brunswick, N.J., 08903. Applicant's representative: William D. Traub, 10 East 40th Street, New York, N.Y., 10016. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Plastics, synthetic*: (other than liquid), from Delaware City, Del., to points in Alabama, Connecticut, Florida, Georgia, Kentucky, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Virginia, West Virginia, and Wisconsin. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 92983 (Sub-No. 482), filed December 1, 1965. Applicant: ELDON MILLER, INC., 531 Walnut Street, Post Office Drawer 617, Kansas City, Mo., 64141. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Acids and chemicals*, in bulk, from points in Florida to points in Arkansas and Tennessee. Note: If a hearing is deemed necessary, applicant requests it be held at Kansas City, Mo.

No. MC 93003 (Sub-No. 45), filed December 3, 1965. Applicant: CARROLL TRUCKING COMPANY, a corpoartion, 4901 U.S. Route 60, East Huntington, W. Va. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (A) *Commodities* which because of size or weight, require the use of special equipment, and *related contractor's materials and supplies*, when their transportation is incidental to the transportation by carrier of commodities, which by reason of size or weight, require special equipment (except aircraft and missiles and parts thereof), and (B) *commodities*, which do not require the use of special equipment when moving in the same shipment or same vehicle with articles which require special equipment because of size or weight, between points in West Virginia, that part of Ohio south of U.S. Highway 40, and that part of Kentucky on and east of a line beginning at the Kentucky-Ohio State line and extending along U.S. Highway 25 to junction U.S. Highway 25W, and thence along U.S. Highway 25W to the Kentucky-Tennessee State line. Note: Applicant states that it presently holds authority in (A) above and seeks no extension of authority in (B) above. Applicant intends to tack any grant of authority. If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill., or Washington, D.C.

No. MC 94350 (Sub-No. 151), filed December 6, 1965. Applicant: TRANSIT HOMES, INC., 210 West McBee Avenue, Greenville, S.C. Applicant's representative: Henry P. Willimon, Greenville, S.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Trailers* designed to be drawn by passenger automobiles, in initial movements from points in Blue Earth County, Minn., to points in the United States, including Alaska, but excluding Hawaii, and *damaged and rejected shipments* on return. Note: If a hearing is deemed necessary, applicant requests it be held at Rochester, Minn.

No. MC 94350 (Sub-No. 152), filed December 6, 1965. Applicant: TRANSIT HOMES, INC., 210 West McBee Avenue, Greenville, S.C. Applicant's representative: Henry P. Willimon, Greenville, S.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Trailers* designed to be drawn by passenger automobiles, in initial movements, from points in Washington County, Va., to points in Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia, and on return, *damaged and rejected shipments*. Note: If a hearing is deemed necessary, applicant requests that it be held at Bristol, Va.

No. MC 94835 (Sub-No. 5), filed December 3, 1965. Applicant: J. ROLLMAN AND SON, INC., Post Office Box 147, Lititz, Pa. Applicant's representative: Christian V. Graf, 407 North Front Street, Harrisburg, Pa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Paper and paper products*, from points in the Borough of Lititz, Lancaster County, Pa., to points in that part of New Jersey on and south of New Jersey Highway 33. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 99744 (Sub-No. 4), filed December 1, 1965. Applicant: VICTOR GROTHAUS, doing business as GROTHAUS EXPRESS, 201 East Fourth Street, Kingsley, Iowa. Applicant's representative: R. W. Wigton, 710 Badgerow Building, Sioux City 1, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except classes A and B explosives, and commodities in bulk in tank vehicles), between Omaha, Nebr., and Moville, Iowa;

from Omaha over U.S. Highway Alternate 30 to Council Bluffs, Iowa, thence over U.S. Highway 75 to Sloan, Iowa, and thence over Iowa Highway 140 to Moville, and return over the same route, serving the intermediate points of Whiting, Sloan, Hornick, and Climbing Hill, Iowa, and the off-route points of Salix and Bronson, Iowa. Note: If a hearing is deemed necessary, applicant requests it be held at Sioux City, Iowa.

No. MC 100666 (Sub-No. 76), filed December 2, 1965. Applicant: MELTON TRUCK LINES, INC., Box 7295, Shreveport, La. Applicant's representative: Wilburn L. Williamson, 443–54 American Building, Oklahoma City 2, Okla. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Plastic conduit, pipe or tubing, with or without valves or fittings, compound, joint sealer, bonding cement, primer, coating, thinner, and accessories*, used in the installation of such conduit, pipe or tubing, from points in Oklahoma County, Okla., to points in the United States (except Alaska, Hawaii, Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island). Note: If a hearing is deemed necessary, applicant requests it be held at Oklahoma City, Okla.

No. MC 101075 (Sub-No. 100), filed December 6, 1965. Applicant: TRANSPORT, INC., 1215 Center Avenue, Moorhead, Minn., 56561. Applicant's representative: Ronald B. Pitsenbarger (same address as applicant). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Liquid fertilizer, fertilizer solutions* and *fertilizer ingredients*, in bulk, from Barnesville, Minn., to points in North Dakota. Note: If a hearing is deemed necessary, applicant requests it be held at Fargo, N. Dak.

No. MC 102520 (Sub-No. 4), filed December 1, 1965. Applicant: RIC'S TRANSFER COMPANY, INC., 1765 Sixth Avenue South, Seattle, Wash., 98134. Applicant's representative: James T. Johnson, IBM Building, Seattle, Wash., 98101. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods as defined by the Commission, commodities in bulk, and commodities requiring special equipment), between points in King, Pierce, Snohomish, and Thurston Counties, Wash. Note: If a hearing is deemed necessary, applicant requests it be held at Seattle, Wash.

No. MC 102682 (Sub-No. 248), filed December 1, 1965. Applicant: HUGHES TRANSPORTATION, INC., 2038 Meeting Street, Post Office Box 851, Charleston, S.C. Applicant's representative: Frank B. Hand, Jr., 921 17th Street NW., Washington, D.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Radioactive source, special nuclear and byproducts materials, radioactive material shipping containers, nuclear reactor component parts and related equipment*, between points in South Carolina, on the one hand, and, on the other, points in Florida. Note: If a hearing is deemed necessary, applicant requests it be held at Charleston, S.C.

No. MC 103654 (Sub-No. 100), filed November 29, 1965. Applicant: SCHIRMER TRANSPORTATION COMPANY, INCORPORATED, 1145 Homer Street, St. Paul, Minn., 55116. Applicant's representative: Donald A. Morken, 1000 First National Bank Building, Minneapolis, Minn., 55402. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Petroleum products and blends thereof*, from Junction City, Wis., and points within 10 miles thereof, to Pine Bend, Minn. Note: If a hearing is deemed necessary, applicant requests it be held at Minneapolis, Minn.

No. MC 103654 (Sub-No. 101), filed November 29, 1965. Applicant: SCHIRMER TRANSPORTATION COMPANY, INCORPORATED, 1145 Homer Street, St. Paul, Minn., 55116. Applicant's representative: Donald A. Morken, 1000 First National Bank Building, Minneapolis, Minn., 55402. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Anhydrous ammonia*, in bulk and tank vehicles, from the plantsite of the Central Farmers Fertilizer Co., at or near Albany, Ill., to points in Illinois, Iowa, Indiana, Minnesota, Missouri, Nebraska, South Dakota, and Wisconsin. Note: If a hearing is deemed necessary, applicant requests it be held at Minneapolis, Minn.

No. MC 103654 (Sub-No. 102), filed November 29, 1965. Applicant: SCHIRMER TRANSPORTATION COMPANY, INCORPORATED, 1145 Homer Street, St. Paul, Minn., 55116. Applicant's representative: Donald A. Morken, 1000 First National Bank Building, Minneapolis, Minn., 55402. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Anhydrous ammonia*, in bulk, and tank vehicles, from the plantsite of the Central Farmers Fertilizer Co., at or near Pine Bend, Minn., to points in Illinois, Iowa, Nebraska, North Dakota, South Dakota, Wisconsin, and the Upper Peninsula of Michigan. Note: If a hearing is deemed necessary, applicant requests that it be held at Minneapolis, Minn.

No. MC 103654 (Sub-No. 104), filed December 2, 1965. Applicant: SCHIRMER TRANSPORTATION COMPANY, INCORPORATED, 1145 Homer Street, St. Paul 16, Minn. Applicant's representative: Donald A. Morken, 1000 First National Bank Building, Minneapolis, Minn., 55402. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Corn products*, including but not limited to corn grits, cornmeal, and corn flour, in bulk, in tank or hopper vehicles, from Milwaukee, Wis., to points in Minnesota. Note: If a hearing is deemed necessary, applicant requests it be held at Milwaukee, Wis.

No. MC 104149 (Sub-No. 177), filed December 1, 1965. Applicant: OSBORNE TRUCK LINE, INC., 520 North 31st Street, Birmingham, Ala. Applicant's representative: Maurice F. Bishop, 325–29 Frank Nelson Building, Birmingham, Ala., 35203. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (A) (1) *Iron and steel products*, between Birmingham, Ala., and points within 10 miles thereof, on the one hand, and, on the other, points in Alabama, Georgia, Mississippi, Tennessee, and those in that part of Louisiana east of the Mississippi River, and (2) *iron and steel commodities* used in, or in connection with, the construction and repair of ships, between Birmingham and Decatur, Ala., on the one hand, and, on the other, Pascagoula, Miss. Note: Applicant states that it presently holds authority under its certificate, MC 104149 (Sub-No. 141) to transport the above commodities between all points involved in this section "in minimum shipments of 10,000 pounds." The only purpose of the application is to remove the minimum weight restriction and requirement of "in minimum shipments of 10,000 pounds." (B) *Iron and steel and iron and steel articles and commodities*, the transportation of which, because of their size or weight, require the use of special equipment, and *related machinery parts* and *contractors' materials and supplies* when their transportation is incidental to the transportation of commodities which, by reason of their size or weight, require the use of special equipment, between points in Alabama.

Note: Applicant states that it proposes to tack the authority presently held by it with any authority granted herein so as to render a through service in the transportation of the subject commodities between points in Alabama, on the one hand, and, on the other, points in Alabama, Georgia, Mississippi, Tennessee, Florida, Arkansas, Oklahoma and those in that part of Louisiana east of the Mississippi River. Applicant states that it presently holds authority to transport the subject commodities between Birmingham, Ala., and points within 10 miles thereof, on the one hand, and, on the other, points in Alabama, Georgia, Mississippi, Tennessee, and those in that part of Louisiana east of the Mississippi River. In addition, it holds authority to transport the subject commodities from Birmingham and Montgomery, Ala., and points within 10 miles of each to points in Florida, and under its Sub 172, it holds authority to transport the subject commodities from Anniston, Montgomery, Decatur, Gadsden, Holt, and Birmingham, Ala., to points in Arkansas and Oklahoma. If a hearing is deemed necessary, applicant requests it be held at Birmingham, Ala.

No. MC 107002 (Sub-No. 278), filed December 1, 1965. Applicant: HEARIN-MILLER TRANSPORTERS, INC., Post Office Box 1123, Highway 80 West, Jackson, Miss., 39205. Applicant's representatives: Harry C. Ames, Jr., 529 Transportation Building, Washington, D.C., 20006 and H. D. Miller, Jr., Post Office Box 1250, Jackson, Miss., 39205. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dry commodities*, in bulk, from Plaquemine, La., to points in Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Michigan, Missouri, Mississippi, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant requests it be held at New Orleans, or Baton Rouge, La.

No. MC 107403 (Sub-No. 658), filed November 30, 1965. Applicant: MATLACK, INC., 10 West Baltimore Avenue, Lansdowne, Pa., 19050. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Chemicals*, in bulk, from Camden, N.J., to Johnsonburg, Pa. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 107403 (Sub-No. 659), filed December 2, 1965. Applicant: MATLACK, INC., 10 West Baltimore Avenue, Lansdowne, Pa., 19050. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Plastics*, synthetic, other than liquid, from Delaware City, Del., to points in Alabama, Connecticut, Florida, Georgia, Kentucky, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Virginia, West Virginia, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 107403 (Sub-No. 660), filed December 6, 1965. Applicant: MATLACK, INC., 10 West Baltimore Avenue, Lansdowne, Pa., 19050. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Petroleum transformer oil*, in bulk, in tank vehicles, from Coraopolis, Pa., to points in Kentucky, and points in that part of Ohio west of U.S. Highway 23 and south of U.S. Highway 40. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 107475 (Sub-No. 58), filed December 1, 1965. Applicant: DANCE FREIGHT LINES, INC., 254 New Circle Road NE., Lexington, Ky., 40505. Applicant's representative: Paul M. Daniell, Suite 1600, First Federal Building, Atlanta, Ga., 30303. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods as defined by the Commission, commodities in bulk, and those requiring special equipment), between Macon, Ga., and Athens, Ga.: From Macon over U.S. Highway 129 to Athens, and return over the same route, serving no intermediate points, as an alternate route only in connection with presently authorized operations. NOTE: Applicant states it will join the proposed alternate route with its existing regular route at both Athens, Ga., and Macon, Ga. If a hearing is deemed necessary, applicant requests it be held at Atlanta, Ga.

No. MC 107500 (Sub-No. 98), filed November 29, 1965. Applicant: BURLINGTON TRUCK LINES, INC., 796 South Pearl Street, Galesburg, Ill. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods as defined in *Practices of Motor Common Carriers of Household Goods*, 17 M.C.C. 467, commodities in bulk, commodities requiring special equipment, and those injurious or contaminating to other lading), between Omaha, Nebr., and junction U.S. Highways 73 and 34 near Plattsmouth, Nebr., over U.S. Highway 73, serving no intermediate points and serving the junction of U.S. Highways 34 and 73 for the purpose of joinder only, as an alternate route for operating convenience only, in connection with carrier's authorized regular route operations. NOTE: Applicant states it is a wholly owned subsidiary of the Chicago, Burlington & Quincy Railroad Co. If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 107515 (Sub-No. 533), filed December 1, 1965. Applicant: REFRIGERATED TRANSPORT CO., INC., Post Office Box 10799, Station A, Atlanta, Ga. Applicant's representative: Paul M. Daniell, Suite 1600, First Federal Building, Atlanta, Ga., 30303. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, from Milton, Pa., to points in Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, and Oklahoma. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 107515 (Sub-No. 534), filed December 1, 1965. Applicant: REFRIGERATED TRANSPORT CO., INC., Post Office Box 10799, Station A, Atlanta, Ga. Applicant's representative: Paul M. Daniell, Suite 1600, First Federal Building, Atlanta, Ga., 30303. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, from Milton, Pa., to points in Indiana, Illinois, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, and Missouri. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 108185 (Sub-No. 33), filed November 29, 1965. Applicant: DIXIE HIGHWAY EXPRESS, INC., 1900 Vanderbilt Road, Post Office Box 365, Birmingham, Ala., 35201. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities* (except those of unusual value, classes A and B explosives, household goods as defined by the Commission, commodities in bulk, commodities requiring special equipment, and those injurious to other lading), between Demopolis and Tuscaloosa, Ala.; Atlanta and Columbus, Ga.; New Orleans, La.; and Jackson, Laurel, and Meridian, Miss., on the one hand, and, on the other, Phoenix and Tucson, Ariz.; Crossett, Fort Smith, Little Rock, Monticello, Pine Bluff, and Springdale, Ark.; Denver, Colo.; Jacksonville, Miami, Pensacola, Tallahasseee, and Tampa, Fla.; Albany, August, Dalton, Macon, Savannah, and Waycross, Ga.; Kansas City, Topeka, and Wichita, Kans.; Monroe and Shreveport, La.; Baltimore, Md.; Boston, Mass.; Bridgeport and Hartford, Conn.; Joplin, Kansas City, Springfield, and St. Joseph, Mo.; Buffalo and Rochester, N.Y.; Asheville, Charlotte, Cherryville, Greensboro, and Hickory, N.C.; Oklahoma City and Tulsa, Okla.; Erie, Harrisburg, Pittsburgh, and York, Pa.; Providence, R.I.; Charleston and Greenville, S.C.; Norfolk and Richmond, Va.; and Abilene, Beaumont, Dallas, Fort Worth, Houston, San Antonio, and Waco, Tex. NOTE: If a hearing is deemed necessary, applicant requests it be held at Birmingham, Ala.

No. MC 109326 (Sub-No. 84), filed December 2, 1965. Applicant: C & D TRANSPORTATION CO., INC., Post Office Box 1503, Mobile, Ala. Applicant's representative: John W. Cooper, 805 Title Building, Birmingham, Ala. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fresh and frozen poultry and poultry products and byproducts*, between points in Jefferson, Blount, Cullman, and Walker Counties, Ala., on the one hand, and, on the other, points in Louisiana, Arkansas, Oklahoma, Kansas, Nebraska, Missouri, Iowa, Illinois, Indiana, Ohio, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, Florida, Maryland, the District of Columbia, and Delaware, and *returned commodities*, as specified above. NOTE: If a hearing is deemed necessary, applicant requests it be held at Birmingham, Ala.

No. MC 109540 (Sub-No. 23), filed December 6, 1965. Applicant: YEARY TRANSFER COMPANY, INCORPORATED, Post Office Box 398, Lexington, Ky. Applicant's representative: Harry Ross, Warner Building, Washington, D.C., 20004. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Iron and steel articles and/or metal products*, between points in Kentucky. NOTE: Applicant states that the proposed operation is to be restricted to traffic having prior movement to a point in Kentucky via barge or via rail carrier. If a hearing is deemed necessary, applicant requests it be held at Lexington, or Louisville, Ky.

No. MC 110420 (Sub-No. 494), filed November 29, 1965. Applicant: QUALITY CARRIERS, INC., 100 South Calumet Street, Burlington, Wis. Applicant's representative: Fred H. Figge, Post Office Box 339, Burlington, Wis., 53105. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Anhydrous ammonia*, in bulk, in tank vehicles, from the plantsite of Olin Mathieson Chemical Corp., at Joliet, Ill., to points in Illinois, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. NOTE: If a hearing is deemed necessary, applicant requests that it be held at Chicago, Ill.

No. MC 110420 (Sub-No. 495), filed November 29, 1965. Applicant: QUALITY CARRIERS, INC., 100 South Calumet

Street, Burlington, Wis. Applicant's representative: Fred H. Figge, Post Office Box 339, Burlington, Wis., 53105. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fertilizer and fertilizer ingredients*, in bulk, from Janesville, Wis., and points within 10 miles thereof, to points in Illinois and Iowa. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 110505 (Sub-No. 65), filed November 26, 1965. Applicant: RINGLE TRANSPORT, INC., 405 South Grant Avenue, Fowler, Ind. Applicant's representative: Robert C. Smith, 620 Illinois Building, Indianapolis 4, Ind. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Canned foodstuffs*, (1) from the plantsites of the Green Giant Co. at or near Beaver Dam, Fox Lake, Ripon, and Rosendale, Wis., to points in Illinois, Indiana, Missouri, Michigan, Ohio, Kentucky, and West Virginia, and (2) from the plantsites of the Green Giant Co. at or near Belvidere, Ill., to points in Indiana, Michigan, Kentucky, and Ohio. Restriction: Transportation in (1) and (2) above is restricted to traffic originating at the described plantsites. Note: If a hearing is deemed necessary, applicant requests it be held at Minneapolis, Minn.

No. MC 110525 (Sub-No. 759), filed December 6, 1965. Applicant: CHEMICAL LEAMAN TANK LINES, INC., 520 East Lancaster Avenue, Downington, Pa. Applicant's representatives: Leonard A. Jaskiewicz, 1155 15th Street NW., Madison Building Washington, D.C., 20005, and Edwin H. van Deusen, (same address as applicant). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Asphalt* (*Asphaltum*), natural, byproduct of petroleum, liquid (other than paint, stain, or varnish), and *asphalt pavement surface sealer*, containing coal-tar inert fillers, and *liquid vehicles*, in bulk, in tank vehicles, from Columbus, Ohio, to points in Wisconsin, Illinois, Iowa, Missouri, and Minnesota. Note: If a hearing is deemed ncessary, applicant requests it be held at Columbus, Ohio.

No. MC 111231 (Sub-No. 102), filed November 29, 1965. Applicant: JONES TRUCK LINES, INC., 610 East Emma Avenue, Springdale, Ark. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except those of unusual value, livestock, grain, classes A and B explosives, household goods as defined by the Commission, commodities in bulk, commodities requiring special equipment and those injurious or contaminating to other lading), (1) between Springdale and Leslie, Ark.; from Springdale over Arkansas Highway 68 to junction U.S. Highway 62 near Alpena, Ark., thence over U.S. Highway 62 to junction U.S. Highway 65, and thence over U.S. Highway 65 to junction Arkansas Highway 66 near Leslie, Ark., and return over the same route, serving no intermediate points and serving Leslie, Ark., for purposes of joinder only, (2) between Leslie and Newport, Ark.; from Leslie over Arkansas Highway 66 to junction Arkansas Highway 14, and thence over Arkansas Highway 14 to Newport, and return over the same route, serving all intermediate points with service at Newport restricted to joinder purposes only, and (3) between Newport and Marked Tree, Ark.; from Newport over Arkansas Highway 14 to junction U.S. Highway 63 near Marked Tree, and return over the same route, serving no intermediate points, with service at Marked Tree restricted to joinder only. Note: If a hearing is deemed necessary, applicant does not specify a place of hearing.

No. MC 111401 (Sub-No. 184), filed December 1, 1965. Applicant: GROENDYKE TRANSPORT, INC., 2510 Rock Island Boulevard, Post Office Box 632, Enid, Okla. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Acids, chemicals, petroleum and petroleum products*, in bulk, from Beaumont, Orange, and Port Neches, Tex., and points within 10 miles thereof, to points in Alabama, Florida, Georgia, Louisiana, Mississippi, and South Carolina, and (2) *acids and chemicals* (other than petroleum based), in bulk, from Beaumont, Orange and Port Neches, Tex., and points within 10 miles thereof, to points in the United States (except Alaska, Alabama, Florida, Georgia, Hawaii, Louisiana, Mississippi, and South Carolina). Note: If a hearing is deemed necessary, applicant requests it be held at Dallas, Tex., or New Orleans, La.

No. MC 111545 (Sub-No. 84), filed December 2, 1965. Applicant: HOME TRANSPORTATION COMPANY, INC., Post Office Box 6426, Station A, 1425 Franklin Road SE., Marietta, Ga., 30060. Applicant's representative: Paul M. Daniell, Suite 1600, First Federal Building, Atlanta, Ga., 30303. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (a) *Machinery* which does not require the use of special equipment when moving in the same shipment or in the same vehicle with heavy machinery which because of size or weight requires the use of special equipment, from Atlanta and East Point, Ga., to points in Alabama, Tennessee, North Carolina, and South Carolina; (b) *machinery and machine tools* which do not require the use of special equipment when moving in the same shipment or in the same vehicle with machinery and machine tools which because of size or weight require the use of special equipment, from the site of the Bell Bomber Plant near Marietta, Ga., to points in Delaware, Missouri, Oklahoma, and Nebraska; and (c) *commodities* (except knitting machines) which do not require the use of special equipment when moving in the same shipment or in the same vehicle with commodities which because of size or weight require the use of special equipment, between Atlanta, Cartersville, and Marietta, Ga., and Columbia, S.C., and points within 50 miles of each, on the one hand, and, on the other, points in Illinois, Indiana, Iowa, Kansas, Michigan, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, and Wisconsin; (d) *crawler type tractors, roadbuilding, construction, and mining machinery, and diesel engines*, which do not require the use of special equipment when moving in the same shipment or in the same vehicle with crawler type tractors, roadbuilding, construction, and mining machinery and diesel engines, the transportation of which by reason of size or weight requires the use of special equipment, from Peoria, Decatur, Joliet, Roanoke, and Chicago, Ill., to points in Mercer, Monroe, Wyoming, Summers, McDowell, Pocahontas, and Creenbrier Counties, W. Va.; (e) *Commodities* which do not require the use of special equipment when moving in the same shipment or in the same vehicle with commodities which because of size or weight require the use of special equipment, between points in North Carolina and South Carolina within 150 miles of Charlotte, N.C., including Charlotte; (f) *commodities* which do not require the use of special equipment (except machinery, equipment, materials, and supplies used in, or in connection with, the discovery, development, production, refining, manufacture, processing, storage, transmission, and distribution of natural gas and petroleum and their products and byproducts, and machinery, materials, equipment, and supplies used in, or in connection with the construction, operation, repair, servicing, maintenance, and dismantling of pipelines, including the stringing and picking up thereof), when moving in the same shipment or in the same vehicle with commodities which because of size or weight require the use of special equipment, between points in Texas, on the one hand, and, on the other, points in Mississippi; and (g) (1) *commodities* which do not require the use of special equipment when moving in the same shipment or in the same vehicle with commodities which because of size or weight require the use of special equipment, between Appleton, Beloit, Green Bay, Manitowoc, Milwaukee, Neenah, and Wausau, Wis., on the one hand, and, on the other, points in North Carolina, and (2) *commodities* (except road construction machinery and equipment), which do not require the use of special equipment when moving in the same shipment or in the same vehicle with commodities which because of size or weight require the use of special equipment, between Appleton, Beloit, Green Bay, Manitowoc, Milwaukee, Neenah, and Wausau, Wis., on the one hand, and, on the other, points in Tennessee. Note: Applicant states that the authority sought in section (g) shall be restricted against joinder with any authority otherwise held by carrier for the purpose of performing through service. If a hearing is deemed necessary, applicant requests it be held at Atlanta, Ga., Washington, D.C., or Chicago, Ill.

No. MC 112617 (Sub-No. 214), filed December 2, 1965. Applicant: LIQUID TRANSPORTERS, INC., Post Office Box 5135, Cherokee Station, Louisville, Ky. Applicant's representative: L. A. Jaskiewicz, 1155 15th Street NW., 600 Madison Building, Washington, D.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dispersants, refrigerants, blends or mixtures thereof*, in bulk, in shipper-owned tank trailers, from the E. I. du Pont de Nemours & Co. plantsite at or near Louisville, Ky., to the Hell Quaker Corp. at Lewisburg, Tenn. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 112893 (Sub-No. 32), filed November 29, 1965. Applicant: BULK TRANSPORT COMPANY, a corporation, 100 South Calumet, Burlington, Wis. Applicant's representative: Fred H. Figge (same address as applicant). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Lubricating oils, petroleum lubricating products, proprietary antifreeze, alcohol compounds, carbon gum and sludge removing compounds, greases, core oils and compounds, and automobile chemicals and compounds*, from Danville and Seneca, Ill., to points in Indiana, Kentucky, Michigan, Minnesota, Ohio, Tennessee, and Wisconsin. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 113678 (Sub-No. 202), filed November 28, 1965. Applicant: CURTIS, INC., 770 East 51st Avenue, Denver, Colo., 80216. Applicant's representative: Duane W. Acklie, Post Office Box 2028, Lincoln, Nebr. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, from the plantsite of American Home Foods, Inc., located at or near Milton, Pa., to points in Iowa, Nebraska, Kansas, and Colorado. Note: If a hearing is deemed necessary, applicant did not specify any particular area.

No. MC 113908 (Sub-No. 180) (amendment), filed September 28, 1965, published Federal Register, issue of October 21, 1965, amended December 10, 1965, and republished as amended this issue. Applicant: ERICKSON TRANSPORT CORPORATION, 706 West Tampa, Post Office Box 3180, Springfield, Mo. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Choline chloride*, in bulk, in tank vehicles, from Kansas City, Kans., to points in Alabama, Arkansas, Delaware, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Mississippi, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. Note: The purpose of this republication is to more clearly set forth the commodity description. If a hearing is deemed necessary, applicant requests it be held at Kansas City, Mo.

No. MC 114045 (Sub-No. 214), filed December 3, 1965. Applicant: TRANS-COLD EXPRESS, INC., Post Office Box 5842, Dallas, Tex. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Candy and confectionery*, from Salt Lake City, Utah, to points in New Mexico, Texas, Oklahoma, Kansas, Missouri, Arkansas, Louisiana, Indiana, Kentucky, Tennessee, Mississippi, Alabama, Georgia, Florida, North Carolina, South Carolina, Virginia, Ohio, West Virginia, Maryland, Delaware, New Jersey, Pennsylvania, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine, and Washington, D.C. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 114045 (Sub-No. 215), filed December 7, 1965. Applicant: TRANS-COLD EXPRESS, INC., Post Office Box 5842, Dallas, Tex. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, and meat byproducts, dairy products and articles* distributed by meat packinghouses, from Guymon, Okla., and points within 10 miles thereof, to points in the United States (except Alaska and Hawaii). Note: If a hearing is deemed necessary, applicant requests it be held at Dallas, Tex.

No. MC 114045 (Sub-No. 216), filed December 8, 1965. Applicant: TRANS-COLD EXPRESS, INC., Post Office Box 5842, Dallas, Tex. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Bananas*, in vehicles, equipped with mechanical refrigeration, from Gulfport, Miss., and New Orleans, La., to points in Kentucky, West Virginia, Ohio, Pennsylvania, Michigan, Indiana, Illinois, and Wisconsin. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 114045 (Sub-No. 217), filed December 13, 1965. Applicant: TRANS-COLD EXPRESS, INC., Post Office Box 5842, Dallas, Tex. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuff*, from Milton, Pa., to points in Colorado, Indiana, Illinois, Iowa, Kansas, Minnesota, Wisconsin, Michigan, Missouri, Nebraska, Oklahoma, and Texas. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 114211 (Sub-No. 95), filed December 3, 1965. Applicant: WARREN TRANSPORT, INC., 213 Witry Street, Post Office Box 420, Waterloo, Black Hawk County, Iowa. Applicant's representative: Charles W. Singer, 33 North La Salle Street, Chicago 2, Ill. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Tillage and harvesting tools, blades, agricultural implements and parts and attachments for harvesting and tillage tools, blades and agricultural implements* when moving in mixed shipments, from Guymon, Okla., to points in the United States (except Alaska and Hawaii), and *rejected shipments*, on return. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 114248 (Sub-No. 2), filed December 2, 1965. Applicant: HOFFMAN RIGGING & CRANE SERVICE, INC., 560 Cortlandt Street, Belleville, N.J. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Commodities*, which because of size or weight require the use of special equipment, and contractors' materials, supplies, and equipment, moving in connection therewith which do not require the use of special equipment, and *dining cars*, between points in that part of Pennsylvania east of the Susquehanna River, Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Rhode Island, and the District of Columbia, and (2) *commodities* which do not require the use of special equipment when moving in the same shipment or in the same vehicle with commodities which because of size or weight require the use of special equipment, between points in that part of Pennsylvania east of the Susquehanna River, Delaware, Connecticut, Maryland, Massachusetts, New Jersey, New York, Rhode Island, and the District of Columbia. Note: Applicant states it holds authority in (1) above in its certificate, MC 114248 and is not requesting any extension of territory. Applicant is seeking only an extension of authority in (2) above. No tacking is involved. If a hearing is deemed necessary, applicant requests it be held at Washington, D.C., or New York, N.Y.

No. MC 114457 (Sub-No. 44), filed December 2, 1965. Applicant: DART TRANSIT COMPANY, 780 North Prior Avenue, St. Paul, Minn. Applicant's representative: James C. Hardman, Tower Suite 3500, 33 North La Salle Street, Chicago, Ill., 60602. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen foods, and dairy replacement products*, from Kansas City, Kans., and Kansas City, Mo., to points in Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, North Dakota, South Dakota, and Iowa. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 114569 (Sub-No. 75), filed December 7, 1965. Applicant: SHAFFER TRUCKING, INC., Elizabethville, Pa. Applicant's representative: James W. Hagar, Commerce Building, Harrisburg, Pa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Foodstuffs*, from Milton, Pa., to points in Colorado, Indiana, Illinois, Iowa, Minnesota, Nebraska, Oklahoma, Ohio, North Dakota, and South Dakota, and (2) *foodstuffs* (other than frozen), from La Porte, Ind., to Milton, Pa. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 114569 (Sub-No. 76), filed December 7, 1965. Applicant: SHAFFER TRUCKING, INC., Elizabethville, Pa. Applicant's representative: James W. Hagar, Commerce Building, Harrisburg, Pa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, from Milton, Pa., to points in Alabama, Georgia, Florida, Louisiana, Mississippi, North Carolina, and South Carolina. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 114725 (Sub-No. 26), filed December 2, 1965. Applicant: WYNNE TRANSPORT SERVICE, INC., 1528 North 11th Street, Omaha, Nebr. Applicant's representative: J. Max Harding, Box 2028, Lincoln, Nebr. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Animal fats and oils and blends thereof*, in bulk, in tank vehicles, from Phelps City, Mo., to points in Arkansas, Iowa, Kansas, Missouri, Nebraska, and points in East St. Louis, Ill., commercial zone. Note: If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 115180 (Sub-No. 26), filed November 26, 1965. Applicant: ONLEY REFRIGERATED TRANSPORTATION, INC., 408 West 14th Street, New York, N.Y. Applicant's representative: George A. Olsen, 69 Tonnele Avenue, Jersey City, N.J., 07306. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, other than in bulk in tank vehicles, (1) from the plantsite and warehouse facilities of American Home Foods located at or near La Porte, Ind., to points in New Jersey, New York, and Pennsylvania, and (2) from the plantsite and warehouse facilities of American Home Foods located at Milton, Pa., to points in Iowa, Indiana, Illinois, Michigan, and Ohio. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 115331 (Sub-No. 166), filed November 29, 1965. Applicant: TRUCK TRANSPORT, INCORPORATED, 707 Market Street, St. Louis, Mo., 63101. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Vegetable oils and blends and products thereof*, in bulk, from Granite City, Ill., to points in Minnesota, Wisconsin, Michigan, Iowa, Illinois, Indiana, Missouri, Kentucky, Arkansas, Tennessee, Louisiana, Mississippi, Alabama, Ohio, Nebraska, Kansas, and Oklahoma. Note: If a hearing is deemed necessary, applicant requests it be held at St. Louis, Mo.

No. MC 115826 (Sub-No. 85) (Amendment), filed August 30, 1965, published in Federal Register issue of September 22, 1965, amended December 13, 1965, and republished as amended this issue. Applicant: W. J. DIGBY, INC., Post Office Box 5088, Terminal Annex, Denver, Colo. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, and meat byproducts, dairy products, and articles* distributed by meat packinghouses, as described in sections A, B, and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766, from Wichita, Kans., to points in Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Montana, Nevada, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, Washington, and Wisconsin. Note: The purpose of this republication is to broaden the destination territory. If a hearing is deemed necessary, applicant does not specify place of hearing.

No. MC 116073 (Sub-No. 55), filed December 6, 1965. Applicant: BARRETT MOBILE TRANSPORT, INC., 1825 Main Avenue, Moorhead, Minn. Applicant's representative: Donald E. Cross, Munsey Building, Washington, D.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Trailers* designed to be drawn by passenger automobile in initial movement in truckaway service, from Abingdon, Va., to points in the United States, including Alaska, but excluding Hawaii. Note: If a hearing is deemed necessary, applicant does not specify a particular location.

No. MC 116465 (Sub-No. 3), filed November 30, 1965. Applicant: YODER & FREY, INC., Archbold, Ohio. Applicant's representative: Earl J. Thomas, Thomas Building, Post Office Drawer 70, 5844–5866 North High Street, Worthington, Ohio, 43085. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Road construction machinery and equipment* as described in appendix VIII of *Descriptions in Motor Carrier Certificates*, Ex Parte No. MC 45, as amended, between points in Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, and Wisconsin, restricted to the transportation of said commodities only when they originate at or are destined to a location within the named States where a published legal auction is or will be performed and then only when said auction is to be performed by Yoder and Frey Auctioneers, Inc. Note: If a hearing is deemed necessary, applicant requests it be held at Columbus, Ohio.

No. MC 116967 (Sub-No. 8), filed December 9, 1965. Applicant: MARTIN WONDAAL, doing business as WONDAAL AND SONS, 2857 Ridge Road, Lansing, Ill. Applicant's representative: Samuel Ruff, 2109 Broadway, East Chicago, Ind. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Brick*, on pallets, on flatbed trailers, from Munster, Ind., to points in Michigan. Note: Applicant states that the proposed operation is to be performed under a continuing contract or contracts with National Brick, Co., of Munster, Ind. If a hearing is deemed necessary, applicant requests that it be held at Chicago, Ill.

No. MC 117119 (Sub-No. 288), filed November 29, 1965. Applicant: WILLIS SHAW FROZEN EXPRESS, INC., Elm Springs, Ark. Applicant's representative: John H. Joyce, 26 North College, Fayetteville, Ark. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen meats*, from Moosic, Pa., to Houston, Tex.; Sioux Falls, S. Dak.; Hopkins, Marshall, and Duluth, Minn.; Bismarck, N. Dak., and Madison, Wis. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 117119 (Sub-No. 296), filed December 3, 1965. Applicant: WILLIS SHAW FROZEN EXPRESS, INC., Elm Springs, Ark. Applicant's representative: John H. Joyce, 26 North College, Fayetteville, Ark., 72702. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts*, and *articles distributed by meat packinghouses*, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates* 61 M.C.C. 209 and 766 (except hides and commodities in bulk, in tank vehicles), from Dodge City, Kans., and Fort Morgan, Colo., to points in Arkansas, Texas, Oklahoma, Alabama, and Florida. Note: If a hearing is deemed necessary, applicant requests it be held at Denver, Colo.

No. MC 117119 (Sub-No. 297), filed December 3, 1965. Applicant: WILLIS SHAW FROZEN EXPRESS, INC., Elm Springs, Ark., 72728. Applicant's representative: John H. Joyce, 26 North College, Fayetteville, Ark. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Candy, confectioneries, and confectionery products and ingredients*, from Reading and West Reading, Pa., to points in Tennessee, Alabama, Mississippi, and Louisiana. Note: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 117119 (Sub-No. 299), filed December 3, 1965. Applicant: WILLIS SHAW FROZEN EXPRESS, INC., Elm Springs, Ark., 72728. Applicant's representative: John H. Joyce, 26 North College, Fayetteville, Ark. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen foods*, from Kansas City, Kans., to points in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. Note: If a hearing is deemed necessary, applicant requests it be held in Washington, D.C.

No. MC 117119 (Sub-No. 300), filed December 6, 1965. Applicant: WILLIS SHAW FROZEN EXPRESS, INC., Elm Springs, Ark., 72728. Applicant's representative: John H. Joyce, 26 North College, Fayetteville, Ark. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen foods*, from Kansas City, Kans., to points in Oregon, Washington, and Idaho. Note: If a hearing is deemed necessary, applicant requests it be held at Boise, Idaho.

No. MC 117883 (Sub-No. 70), filed November 24, 1965. Applicant SUBLER TRANSFER, INC., East Main Street, Versailles, Ohio. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Foodstuffs*, from the plantsite of American Home Foods located at or near La Porte, Ind., to points in Iowa, Kansas, Missouri, Nebraska, and Wisconsin.

Note: If a hearing is deemed necessary, applicant does not specify location.

No. MC 117883 (Sub-No. 71), filed November 26, 1965. Applicant: SUBLER TRANSFER, INC., East Main Street, Versailles, Ohio. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen potatoes*, and *potato products*, from points in Maine, to points in Illinois, Indiana, Iowa, Michigan, Missouri, Ohio, Pennsylvania, and Wisconsin. Note: If a hearing is deemed necessary, applicant does not specify location.

No. MC 117883 (Sub-No. 72), filed December 6, 1965. Applicant: SUBLER TRANSFER, INC., East Main Street, Versailles, Ohio. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen potatoes* and *frozen potato products; frozen fruits* and *frozen fruit products; frozen vegetables* and *frozen vegetable products*, from Detroit, Mich., to points in Connecticut, Delaware, Florida, Georgia, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and the District of Columbia. Note: Applicant states that the proposed operation is to be restricted to the transportation of shipments originating at the storage and warehouse facilities used by Ore-Ida Foods, Inc. If a hearing is deemed necessary, applicant requests it be held at Detroit, Mich.

No. MC 118196 (Sub-No. 53), filed December 3, 1965. Applicant: RAYE & COMPANY TRANSPORT, INC., Highway 71 North, Post Office Box 613, Carthage, Mo. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products and meat byproducts, and articles* distributed by meat packinghouses, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except commodities in bulk, and in tank vehicles), from points in Adams County, Nebr., to points in Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming. Note: If a hearing is deemed necessary, applicant does not specify place of hearing.

No. MC 118468 (Sub-No. 21), filed December 2, 1965. Applicant: UMTHUN TRUCKING CO., a corporation, 910 South Jackson Street, Eagle Grove, Iowa, 50533. Applicant's representative: J. Max Harding, Box 2028, Lincoln, Nebr., 68501. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Gypsum products and building materials* moving herewith, from the plantsite of the United States Gypsum Co., Fort Dodge, Iowa, to points in Kansas and Missouri, limited to a transportation service to be performed under a continuing contract with the United States Gypsum Co. of Fort Dodge, Iowa. Note: Applicant is also authorized to conduct operations as a common carrier in Certificate No. MC 124813 and subs thereunder; therefore, dual operations may be involved. If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 118561 (Sub-No. 9), filed December 10, 1965. Applicant: HERBERT B. FULLER, doing business as FULLER TRANSFER COMPANY, 212 East Street, Maryville, Tenn. Applicant's representative: Harold Seligman, 1808 West End Building, Nashville, Tenn., 37203. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meat, meat products, and meat byproducts, dairy products* and *articles distributed by meat packinghouses*, as defined in sections A, B, and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, M.C.C. 209 and 766, in vehicles equipped with temperature control devices, from Knoxville, Tenn., and points in Blount County, Tenn., to points in Buchanan, Dickenson, Lee, Russell, Scott, Smyth, Washington, and Wise Counties, Va., and Bristol, Va.; Bell, Clay, Harlan, Knox, Laurel, McCreary, Perry, Pulaski, and Whitley Counties, Ky.; Buncombe, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Rutherford, Transylvania, and Yancey Counties, N.C.; and Anderson, Bount, Campbell, Carter, Claiborne, Cocke, Cumberland, Davidson, Monroe, Grainger, Greene, Hamblen, Hancock, Hawkins, Jefferson, Knox, Loudon, McMinn, Morgan, Roane, Scott, Sevier, Sullivan, Unicoi, Union, and Washington Counties, Tenn. Note: If a hearing is deemed necessary, applicant requests it be held at Nashville, Tenn.

No. MC 118567 (Sub-No. 2), filed November 26, 1965. Applicant: NYAD MOTOR FREIGHT, INC., Pier 22, East River, New York, N.Y. Applicant's representative: Michael J. Shea, Pennsylvania Building, Washington, D.C., 20004. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: Such *commodities* as are handled, used, sold, or dealt in by chain or department stores, between New York, N.Y., Metuchen, N.J., and Windsor Locks, Conn., on the one hand, and, on the other, points in New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Pennsylvania, Delaware, Virginia, and Maryland. Note: Applicant states that it seeks to expand its authority between Windsor Locks, Conn., New York, N.Y., and Metuchen, N.J., on the one hand, and, on the other, points in Maine, New Hampshire, and Vermont. Applicant states that it will serve the W. T. Grant Co. only, and the equipment used in such service will be devoted exclusively for the shipper. If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 119285 (Sub-No. 1), filed November 26, 1965. Applicant: YELLOW CAB, INC., 109 Market Street, Lima, Ohio. Applicant's representatives: David C. Stradley, 50 West Broad Street, Columbus, Ohio, 43215, and Paul F. Beery, 100 East Broad Street, Columbus, Ohio, 43215. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Machinery parts*, and *automotive parts, materials and supplies*, between Lima, Ohio, on the one hand, and, on the other, points in Michigan, Indiana, Illinois, Pennsylvania, and New York. Note: Applicant states that the proposed operations is to be limited to a transportation service to be performed, under a continuing contract or contracts, with Superior Coach. If a hearing is deemed necessary, applicant requests it be held at Columbus, Ohio.

No. MC 119767 (Sub-No. 144), filed November 24, 1965. Applicant: BEAVER TRANSPORT CO., a corporation, Post Office Box 339, 100 South Calumet Street, Burlington, Wis. Applicant's representative: Fred H. Figge, Post Office Box 339, Burlington, Wis. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Canned or preserved foodstuff* from Green Bay, Wis., to points in North Dakota, South Dakota, Kansas, and Nebraska, and Estherville, Des Moines, Mason City, and Waterloo, Iowa, and Casper, Wyo. Note: If a hearing is deemed necessary, applicant requests it be held at Minneapolis, Minn.

No. MC 119767 (Sub-No. 146), filed November 29, 1965. Applicant: BEAVER TRANSPORT CO., a corporation, 100 South Calumet Street, Burlington, Wis. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen foods*, from Detroit, Mich., to points in Missouri, Tennessee, and Wisconsin. Note: If a hearing is deemed necessary, applicant requests it be held at New York, N.Y.

No. MC 119777 (Sub-No. 47), filed October 6, 1965. Applicant: LIGON SPECIALIZED HAULER, INC., Post Office Box 31, Madisonville, Ky. Applicant's representative: Robert M. Pearce, Central Building, 1033 State Street, Bowling Green, Ky., 42101. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Iron and steel* and *iron and steel articles*, between Cincinnati, Ohio, on the one hand, and, on the other, points in Kentucky, Tennessee, and those in Indiana on and south of Indiana Highway 44 and on and east of Interstate Highway 65, and those points in Wayne, Cabell, Putnam, Lincoln, and Kanawha Counties, W. Va. Note: Applicant states that it intends to tack the above proposed authority with that authority previously granted in Certificates No. MC 119777, Subs 10, 21, 22, and 27, wherein applicant is authorized to serve points in the States of Ohio, Pennsylvania, Kentucky, Tennessee, West Virginia, Arkansas, Louisiana, Mississippi, Texas, Indiana, Illinois, Alabama, Georgia, Iowa, Missouri, and Wisconsin. If a hearing is deemed necessary, applicant requests it be held at Columbus, Ohio.

No. MC 119778 (Sub-No. 99), filed December 6, 1965. Applicant: REDWING CARRIERS, INC., Post Office Box 34, Powderly Station, Birmingham, Ala. Applicant's representative: J. Douglas Harris, 410–411 Bell Building, Montgomery, Ala., 36104. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Liquid fertilizer solutions*, in bulk, in tank vehicles, from the storage facilities of the Allied Chemical Corp., in Decatur County, Ga., to points in Alabama, Georgia, and Florida. NOTE: If a hearing is deemed necessary, applicant does not specify a location.

No. MC 119778 (Sub-No. 100), filed December 6, 1965. Applicant: REDWING CARRIERS, INC., Post Office Box 34, Powderly Station, Birmingham, Ala. Applicant's representative: J. Douglas Harris, 410-411 Bell Building, Montgomery, Ala., 36104. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Salt*, in bulk, from points in Mobile County, Ala., to points in Florida and Mississippi. NOTE: If a hearing is deemed necessary, applicant requests it be held at Montgomery, Ala., Birmingham, Ala., or Atlanta, Ga.

No. MC 119974 (Sub-No. 9), filed November 29, 1965. Applicant: L. C. L. TRANSIT COMPANY, a corporation, Post Office Box 949, Green Bay, Wis., 54305. Applicant's representative: Edward Solie, Executive Building, Suite 100, 4513 Vernon Boulevard, Madison 5, Wis. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Frozen foods*, from the plantsite of the Green Giant Co. located at Belvidere, Ill., to points in that part of the Lower Peninsula of Michigan north of the northern boundary of Muskegon, Kent, Montcalm, Gratiot, Midland, Gladwin, Arenac, and Iosco Counties, Mich.; points in Kentucky, Ohio, and West Virginia; and points in New York and Pennsylvania on and west of Interstate Highway 81. NOTE: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 121556 (Sub-No. 1), filed December 6, 1965. Applicant: S-LINE TRANSPORTATION, INC., 2062 Smith Street, North Providence, R.I. Applicant's representative: Francis E. Nute, 177 Benefit Street, Providence, Rhode Island, 02903. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities* (except commodities in bulk, classes A and B explosives, articles of unusual value or contaminating to other lading, household goods as defined by the Commission, and commodities requiring special equipment) between points in Rhode Island. NOTE: If a hearing is deemed necessary, applicant requests it be held at Providence, R.I.

No. MC 123383 (Sub-No. 17), filed November 24, 1965. Applicant: BOYLE BROTHERS, INC., 256 River Road, Edgewater, N.J. Applicant's representative: Morton E. Keil, 140 Cedar Street, New York 6, N.Y. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Gypsum products and urethane foam*, from Edgewater, N.J., to points in Pennsylvania, and *returned shipments*, on return. NOTE: Applicant states no duplicating authority is requested. Applicant is presently authorized to transport gypsum products and building and insulating materials from Edgewater, N.J., to 23 eastern Pennsylvania counties. If a hearing is deemed necessary, applicant requests it be held at Newark, N.J. or New York, N.Y.

No. MC 123502 (Sub-No. 17), filed December 6, 1965. Applicant: FREE STATE STONE SERVICE, INC., 10 Vernon Avenue, Glen Burnie, Md. Applicant's representative: Donald E. Freeman, 172 East Green Street, Post Office Box 880, Westminster, Md., 21157. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Loose, flowable, and fungible commodities*, in bulk, in dump vehicles, from Pittsburgh, Pa., to Baltimore, Md., and (2) *iron pyrite cinders*, in bulk, in dump vehicles, from North Claymont, Del., to points in Maryland, Virginia, Pennsylvania, and West Virginia (except Martinsburg, W. Va.). NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 123883 (Sub-No. 7), filed December 6, 1965. Applicant: CONTINENTAL DISPATCH, INC., 425 Bolton Avenue, Post Office Box 4407, Alexandria, La. Applicant's representative: Clarence Evans, Third National Bank Building, Nashville, Tenn., 37219. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Commercial papers, documents and written instruments* ordinarily used in the business of banks and banking institutions (excluding coins, currency, bullion, and negotiable instruments), *business papers, records and audit, and accounting media, and information* of all kinds (except plant removals), *exposed and processed film and prints, complimentary replacement film, incidental dealer handling supplies and advertising material moving therewith* (other than for commercial theater or television exhibition), and *electromagnetically coded or impregnated forms and documents*, originating at or destined to a bank or banking institution, (1) between points in Alabama, on the one hand, and, on the other, points in Georgia, (2) between points in Tennessee on and east of the westerly crossing of the State by the Tennessee River, on the one hand, and, on the other, points in Georgia on and north of U.S. Highway 78, and (3) between points in Tennessee on and east of the westerly crossing of the State by the Tennessee River on the one hand, and, on the other, points in Alabama on north of U.S. Highway 80. NOTE: Applicant states it seeks no duplicating authority. If a hearing is deemed necessary, applicant requests it be held at Nashville, Tenn.

No. MC 124062 (Sub-No. 2), filed December 1, 1965. Applicant: FRICK TRANSPORT, INC., Wawaka, Ind. Applicant's representative: Donald W. Smith, Suite 511 Fidelity Building, Indianapolis, Ind., 46204. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fertilizer and fertilizer ingredients*, from Wawaka, Ind., to points in the Lower Peninsula of Michigan, and Ohio. NOTE: If a hearing is deemed necessary, applicant requests it be held at Indianapolis, Ind.

No. MC 124062 (Sub-No. 3), filed November 29, 1965. Applicant: FRICK TRANSPORT, INC., Wawaka, Ind. Applicant's representative: Donald W. Smith, Suite 511, Fidelity Building, Indianapolis, Ind., 46204. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Anhydrous ammonia*, in bulk, in tank vehicles, from the plantsite and terminal facilities of Olin Mathieson Chemical Corp., at or near Joliet, Ill., to points in Indiana, the Lower Peninsula of Michigan, and points in Ottawa, Sandusky, Crawford, Morrow, Delaware, Franklin, Pickaway, Rodd, Pike, and Scioto Counties, Ohio, and points in Ohio west of the counties specified. NOTE: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 114324 (Sub-No. 7), filed December 3, 1965. Applicant: MURPHY TRUCKING CO., INC., Denver, Ind. Applicant's representative: Donald W. Smith, Suite 511 Fidelity Building, Indianapolis, Ind., 46204. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dry fertilizer*, in bulk, and in bags, from Kewanna, Ind., to points in the Lower Peninsula of Michigan. NOTE: If a hearing is deemed necessary, applicant requests it be held at Indianapolis, Ind.

No. MC 124324 (Sub-No. 8), filed December 3, 1965. Applicant: MURPHY TRUCKING CO., INC., Denver, Ind. Applicant's representative: Donald W. Smith, Suite 511, Fidelity Building, Indianapolis, Ind., 46204. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dry feeding phosphate*, in bulk, and in bags, from Sylvania, Ohio, to points in Indiana. NOTE: If a hearing is deemed necessary, applicant requests it be held at Indianapolis, Ind.

No. MC 124411 (Sub-No. 4), filed December 6, 1965. Applicant: SULLY TRANSPORT, INC., Sully, Iowa. Applicant's representative: William A. Landau, 1307 East Walnut Street, Des Moines, Iowa., 50306. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Liquified petroleum gas*, in bulk, in tank vehicles, from the Mid-American Pipeline Terminal at or near Cantril, Iowa, to points in Illinois and Missouri. NOTE: If a hearing is deemed necessary, applicant requests it be held at Des Moines, Iowa.

No. MC 124417 (Sub-No. 7), filed November 29, 1965. Applicant: ALPHONSE HINDERMAN AND VINCENT HINDERMAN, a partnership, doing business as HINDERMAN BROTHERS, Dickeyville, Wis. Applicant's representative: John T. Porter, 708 First National Bank Building, Madison, Wis., 53703. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Animal and poultry feeds and feed ingredients*, from New Milford, Ill., to points in Wisconsin on and south of U.S. Highway 10 and on and west of U.S. Highway 51. NOTE: If a hearing is deemed necessary, applicant requests it be held at Madison, Wis.

No. MC 124417 (Sub-No. 8), filed December 2, 1965. Applicant: ALPHONSE HINDERMAN AND VINCENT HINDERMAN, a partnership, doing business as HINDERMAN BROTHERS, Dickeyville, Wis. Applicant's representative: John T. Porter, 708 First National Bank Building, Madison, Wis., 53703. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dry fertilizer*, in bulk, in trailers equipped with other than air unloading devices, from Dubuque, Iowa, and points within 10 miles thereof, to points in Minnesota on and south of U.S. Highway 12 and in Illinois on and north of U.S. Highway 24. Note: If a hearing is deemed necessary applicant requests it be held at Madison, Wis.

No. MC 124669 (Sub-No. 15), filed November 29, 1965. Applicant: TRANSPORT, INC. OF SOUTH DAKOTA, 1012 West 41st Street, Sioux Falls, S. Dak. Applicant's representative: Ronald B. Pitsenbarger, Post Office Box 396, Moorhead, Minn. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Urea*, dry, in bags or bulk, *urea solutions, ammonium nitrate solutions, nitrogenous fertilizer solutions and nitric acid*, in bulk, from Cheyenne, Wyo., and points within five (5) miles thereof, to points in North Dakota, South Dakota, Minnesota, Iowa, and Nebraska. Note: If a hearing is deemed necessary, applicant requests it be held at Cheyenne, Wyo.

No. MC 124669 (Sub-No. 16), filed November 29, 1965. Applicant: TRANSPORT, INC., of SOUTH DAKOTA, 1012 West 41st Street, Sioux Falls, S. Dak., 57105. Applicant's representative: Ronald B. Pitsenbarger, Post Office Box 396, Moorhead, Minn. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Feed and feed ingredients*, in bulk, from Weeping Water, Nebr., to points in Iowa, Kansas, Minnesota, Missouri, North Dakota, South Dakota, and Wyoming. Note: If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

No. MC 125474 (Sub-No. 15), filed December 3, 1965. Applicant: BULK HAULERS, INC., 1902 Wooster Street, Wilmington, N.C. Applicant's representative: John C. Bradley, Suite 618 Perpetual Building, 1111 E Street NW., Washington, D.C., 20004. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fertilizer and fertilizer materials*, in bulk, between Wilmington, N.C., and points within 25 miles thereof, on the one hand, and, on the other, points in South Carolina. Note: If a hearing is deemed necessary, applicant requests it be held at Raleigh, N.C.

No. MC 125694 (Sub-No. 5), filed November 26, 1965. Applicant: OTTO FELDT, INC., Route 22, Brewster, N.Y. Applicant's representative: George A. Olsen, 69 Tonnele Avenue, Jersey City, N.J., 07306. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Machinery*, in dump vehicles, between Darby and Ansonia, Conn., Brooklyn, N.Y., and South Plainfield, N.J., restricted to a continuing contract with Kentile Floors, Inc. If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

No. MC 125952 (Sub-No. 3), filed December 2, 1965. Applicant: INTERSTATE DISTRIBUTOR COMPANY, a corporation, 2215 Puyallup Avenue, Tacoma, Wash. Applicant's representative: George R. LaBissoniere, 533 Central Building, Seattle, Wash. 98104. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Such merchandise* as is dealt in by wholesale and retail grocery establishments, between points in California, on the one hand, and, on the other, Bellevue, Bellingham, and Port Angeles, Wash. Note: Applicant has common carrier authority under MC 117201, therefore, dual operations may be involved. The proposed service to be for the account of American Wholesale Grocery Co. only. If a hearing is deemed necessary, applicant requests it be held at Seattle, Wash.

No. MC 126154 (Sub-No. 2), filed November 24, 1965. Applicant: DOMENIC MARCHI, 503 North Stephenson Avenue, Iron Mountain, Mich. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Malt beverages*, from St. Paul, Minn., to Millecoquins Lake (Mackinac County), Mich., and *empty containers*, on return. Note: If a hearing is deemed necessary, applicant requests it be held at Milwaukee, Wis.

No. MC 126822 (Sub-No. 4), filed November 29, 1965. Applicant: PASSAIC GRAIN & WHOLESALE CO., INC., Post Office Box 23, Passaic, Mo. Applicant's representative: Carll V. Kretsinger, Suite 510 Professional Building, Kansas City, Mo., 64106. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Hides*, (a) from points in the United States (excluding Alaska and Hawaii) to Laredo, Eagle Pass, and Brownsville, Tex., and *refused, rejected or damaged shipments*, on return; and (b) between Little Rock and Fort Smith, Ark., and Muskogee and Enid, Okla., on the one hand, and, on the other, points in the United States (excluding Alaska and Hawaii). Note: If a hearing is deemed necessary, applicant requests it be held at Kansas City, Mo.

No. MC 127033 (Sub-No. 5), filed December 3, 1965. Applicant: C. & B. TRUCKING CO., INC., Post Office Box 192, Chester, S.C. Applicant's representative: Henry P. Willimon, Box 1075, Greenville, S.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Dry fertilizer* in bulk, and in bags, from Wilmington, N.C., to points in South Carolina. Note: If a hearing is deemed necessary, applicant requests it be held at Columbia, S.C.

No. MC 127042 (Sub-No. 11), filed December 2, 1965. Applicant: HAGEN, INC., 4120 Floyd Street, Sioux City, Iowa. Applicant's representative: J. Max Harding, Post Office Box 2028, Lincoln, Nebr., 68501. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, packinghouse products* and *commodities* used by packinghouses, as described in appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except hides and commodities in bulk, in tank vehicles), from points in Iowa to points in Idaho, Illinois, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming. Note: Applicant holds contract carrier authority in MC 115915, therefore dual operations may be involved. If a hearing is deemed necessary, applicant requests it be held at Des Moines, Iowa.

No. MC 127047 (Sub-No. 3), filed November 29, 1965. Applicant: ED RACETTE & SON, INC., 5409 North Broadway, Wichita, Kans. Applicant's representative: John E. Jandera, 641 Harrison Street, Topeka, Kans., 66603. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Building*, prefabricated, in pieces or sections, *materials, equipment and supplies* used or useful in construction, selling, or distribution thereof, when shipped to building sites to be used in the erection and completion of such buildings, from Houston, Tex., to points in Kansas, Oklahoma, Missouri, Nebraska, South Dakota, Arkansas, and that portion of Colorado lying on and east of U.S. Highway 87. Note: If a hearing is deemed necessary, applicant requests it be held at Wichita, Kans.

No. MC 127253 (Sub-No. 21), filed November 29, 1965. Applicant: GRACE LEE CORBETT, doing business as R. A. CORBETT TRANSPORT, Post Office Box 86, Lufkin, Tex. Applicant's representative: Ewell H. Muse, Jr., Suite 415, Perry Brooks Building, Austin, Tex., 78701. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fertilizer and fertilizer materials*, in bags and in bulk, from Harvey, La., to points in Arkansas. Note: If a hearing is deemed necessary, applicant requests it be held at Little Rock, Ark.

No. MC 127280 (Sub-No. 1), filed November 23, 1965. Applicant: OWASCO VALLEY TRUCKING COMPANY, INC., Moravia, N.Y. Applicant's representative: E. Stephen Heisley, Transportation Building, Washington, D.C., 20006. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Potash*, in bulk, in dump vehicles, from Oswego, N.Y., to points in New York, New Jersey, Pennsylvania, Massachusetts, and Connecticut. Note: Common control may be involved. If a hearing is deemed necessary, applicant requests it be held at Buffalo, N.Y.

No. MC 127303 (Sub-No. 2), filed November 29, 1965. Applicant: HENRY ZELLMER, doing business as ZELLMER TRUCK LINES, Granville, Ill. Applicant's representative: Robert H. Levy, 29 South La Salle Street, Chicago, Ill., 60603. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Paint and paint materials*, from Terre Haute, Ind., to Granville, Ill. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 127303 (Sub-No. 3), filed November 29, 1965. Applicant: HENRY ZELLMER, doing business as ZELLMER TRUCK LINES, Granville, Ill. Applicant's representative: Robert H. Levy, 29 South La Salle Street, Chicago, Ill., 60603. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Malt beverages and related advertising materials*, (1) from Minneapolis, Minn., to Pontiac, Dixon, and Lockport, Ill., and (2) from Newport, Ky., Sheboygan and La Crosse, Wis., and Detroit, Mich., to Peoria, Ill. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 127392 (Sub-No. 1), filed December 2, 1965. Applicant: NORWOOD S. BROWN, 617 Douglas Street, Morris, Ill. Authority sought to operate as a *contract carrier*, by motor vehicle, over regular routes, transporting. *Cheese*, from Ottawa, Ill., over Illinois Highway 23 north to U.S. Highway 52, thence west to Illinois Highway 26, north to Wisconsin Highway 69, thence north to Monroe, Wis., and return over the same route, serving no intermediate points. Note: Applicant states the proposed service to be for the accounts of Borden Foods Co., and Ottawa Milk Products Co. If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 127528 (Sub-No. 1), filed November 29, 1965. Applicant: P & B TRANSFER & STORAGE CO., INC., 963 South Bellevue Boulevard, Memphis, Tenn. Applicant's representative: James W. Wrape, 2111 Sterick Building, Memphis, Tenn., 38103. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Household goods*, as defined in the *Practices of Motor Carriers of Household Goods*, 17 M.C.C. 467, between points in Shelby, Tipton, Fayette, Hardemon, Haywood, Madison, Lauderdale, Crockett, and Dyer Counties, Tenn., Crittenden, St. Francis, Phillips, Mississippi, Monroe, Craighead, Cross, Lee, and Poinsett Counties, Ark., and De Soto, Tunica, Tate, Marshall, Lafayette, Coahoma, Panola, Quitman, Tippah, and Union Counties, Miss. Note: If a hearing is deemed necessary, applicant requests that it be held at Memphis, Tenn.

No. MC 127609 (Sub-No. 1), filed November 26, 1965. Applicant: BERT L. BOWLSBY AND BRUCE F. BOWLSBY, a partnership, doing business as IRVINGTON TRANSFER AND STORAGE CO., 1924 Northeast Couch Street, Portland, Oreg. Applicant's representative: Robert R. Hollis, Commonwealth Building, Portland, Oreg., 97204. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Such merchandise* as is dealt in by retail department stores, between retail department stores, or their warehouses, in Multnomah County, Oreg., and customers of such stores located in Clark County, Wash. Note: Applicant states that the proposed service will be under special and individual agreements and contracts with Art Erickson Furniture Co., Lipman Wolfe and Co., Rhodes Western, Inc., and Montgomery Ward & Co. If a hearing is deemed necessary, applicant requests it be held at Portland, Oreg.

No. MC 127625 (Correction), filed October 5, 1965, published Federal Register, issue of October 28, 1965, and republished as corrected this issue. Applicant: SANTEE CEMENT CARRIERS, INC., Holly Hill, S.C. Applicant's representative: Frank B. Hand, Jr., 921 Seventeenth Street NW., Washington 6, D.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Cement*, (1) from the plantsite of the Santee Portland Cement Co., Holly Hill, S.C., to points in Georgia, North Carolina, and those in Tennessee on and east of U.S. Highway 127; and (2) from railroad sidings in the destination territory named in (1) above to points in Georgia, North Carolina, and those in Tennessee on and east of U.S. Highway 127 restricted to traffic originating at the named plantsite and having a prior movement by rail. Note: The purpose of this republication is to show applicant's correct name as shown above in lieu of Santee Portland Cement Carriers, Inc., as originally filed and published in error. If a hearing is deemed necessary, applicant requests it be held at Washington, D.C., or Charleston, S.C.

No. MC 127625 (Sub-No. 1), filed December 1, 1965. Applicant: SANTEE CEMENT CARRIERS, INC., Holly Hill, S.C. Applicant's representative: Frank B. Hand, Jr., 921 17th Street NW., Washington 6, D.C. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Gypsum rock and gypsum products*, from points in Bryan, Chatham, and Effingham Counties, Ga., to points in South Carolina. Note: If a hearing is deemed necessary, applicant requests it be held at Charleston, S.C.

No. MC 127735 (Sub-No. 2), filed November 29, 1965. Applicant: ROY E. BARKER, doing business as ROY E. BARKER, PRODUCE, 121 Magnolia Street, North Little Rock, Ark. Applicant's representative: Louis Tarlowski, Pyramid Life Building, Little Rock, Ark. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Wooden wirebound boxes*, knocked down, in bundles, from the plantsite of Arkansas Wirebound Box Co., Inc., Atkins, Ark., to points in Florida, Colorado, and Hidalgo, Cameron, Dimmit, Zavala, Maverick, Webb, Willacy, Starr, and Bexar Counties, Tex., and *exempt agricultural commodities and damaged and rejected shipments* of the commodities specified above, on return. Applicant states the proposed service will be rendered by a continuing contract with Arkansas Wirebound Box Co., Inc., of Atkins, Ark. If a hearing is deemed necessary, applicant requests it be held at Little Rock, Ark.

No. MC 127748 (Sub-No. 1), filed December 1, 1965. Applicant: FOURMEN DELIVERY SERVICE, INC., 153-58 Rockaway Boulevard, Jamaica, N.Y. Applicant's representative: Arthur J. Piken, 160-16 Jamaica Avenue, Jamaica 32, N.Y. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *Luggage, and such personal property* usually carried by airline passengers between La Guardia Airport, John F. Kennedy International Airport, both at New York, N.Y., and Newark Airport, Newark, N.J., on the one hand, and, on the other, points in New York, Connecticut, Massachusetts, New Jersey, Pennsylvania, Maryland, and the District of Columbia; and (2) *such merchandise* as is dealt in or used by airlines including, but not limited to, airplane parts and accessories, office memoranda, etc., between John F. Kennedy International Airport, La Guardia Airport, both at New York, N.Y., and Newark Airport, Newark, N.J., on the one hand, and, on the other, Logan International Airport, Boston, Mass., Washington National Airport and Dulles International Airport, both at Washington, D.C., Baltimore Friendship International Airport, Baltimore, Md., Bradley Field Airport, Windsor Locks, Conn., Philadelphia International Airport, Philadelphia, Pa., Greater Pittsburgh Airport, Pittsburgh, Pa., and Long Island Airport (MacArthur Airport), Islip, Long Island, N.Y. Note: If a hearing is deemed necessary, applicant requests it be held at New York, N.Y.

No. MC 127761, filed November 29, 1965. Applicant: ELMER MONK, 1021 Shayler Road, Cincinnati, Ohio. Applicant's representative: James R. Stiverson, 50 West Broad Street, Columbus 15, Ohio, and Herbert Baker (same address as above). Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: (1) *Iron wire*, from Chicago, and Waukegan, Ill., to Kokomo, Ind., Detroit, Mich., and Johnstown, Pa., to Newtown, Ohio, and (2) *staples and pneumatic tools*, from Newtown, Ohio, to Chicago, and Waukegan, Ill., Kokomo, Ind., Detroit, Mich., and Johnstown, Pa. Note: If a hearing is deemed necessary, applicant requests it be held at Columbus, Ohio.

No. MC 127765, filed December 2, 1965. Applicant: CUSTOM CARTAGE, a corporation, 4538 Fillmore Street, Chicago, Ill. Applicant's representative: James F. Flanagan, 111 West Washington Street, Chicago, Ill., 60602. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Bakery goods*, from Des Plaines, Ill., to points in Alabama, California, Connecticut, Delaware, Florida, Georgia, Maryland, Mississippi, Nevada, New Mexico, New York, North Carolina, Pennsylvania, Oregon, South Carolina, Texas, Utah, Virginia, and Washington, and the District of Columbia, under continuing contracts with Bake Line Products Co. Note: If a hearing is deemed necessary, applicant requests it be held at Chicago, Ill.

No. MC 127767, filed December 2, 1965. Applicant: DOMINIC E. LYNCH, doing business as D. E. LYNCH CONSTRUCTION COMPANY, Post Office Box 246, Watseka, Ill. Applicant's representative: Charles R. Young, Suite 500, McMullen Building, Danville, Ill., 61833. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Crushed limestone, sand, gravel and asphalt mix*, in bulk (except liquid asphalt in tank vehicles), from points in Newton County, Ind., to points in Kankakee, Iroquois, and Ford Counties, Ill. NOTE: If a hearing is deemed necessary, applicant requests it be held at Springfiled, Ill.

No. MC 127772, filed December 6, 1965. Applicant: TIROD CORPORATION, 17–25 Varick Street, New York, N.Y. Applicant's representative: Richard A. Kerwin, Tower Suite 3600, 33 North La Salle Street, Chicago, Ill., 60602. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Meats and packinghouse products, dairy products, and canned, preserved and frozen foodstuffs*, between New York, N.Y., Newark, N.J., and Philadelphia, Pa., on the one hand, and, on the other, New York, Pennsylvania, Ohio, Michigan, Illinois, Indiana, Missouri, Kentucky, Virginia, West Virginia, Wisconsin, Minnesota, and Iowa. Restriction: The transportation requested herein will be performed under a bilateral contract with Atalanta Trading Corp. of New York, N.Y. NOTE: If a hearing is deemed necessary, applicant requests it be held at Washington, D.C.

Motor Carriers of Passengers

No. MC 2832 (Sub-No. 4), filed December 14, 1965. Applicant: E. J. KELLEY CO., doing business as LITCHFIELD HILLS LINE, 30 Railroad Square, Torrington, Conn. Applicant's representative: John R. Sims, Jr., Suite 1208, 1750 Pennsylvania Avenue, NW., Washington, D.C. 20006. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Passengers and their baggage*, in round trip special operations, beginning and ending at points in Litchfield County, Conn., and extending to the Borough of Manhattan, N.Y., and the sites of the Shea Stadium and the Yankee Stadium, New York City, N.Y. NOTE: If a hearing is deemed necessary, applicant requests it be held at Hartford, Conn.

No. MC 106170 (Sub-No. 7), filed December 2, 1965. Applicant: THE GRAY LINE SCENIC TOURS, INC., 1675 Mill Street, Reno, Nev. Applicant's representative: Bertram S. Silver, 140 Montgomery Street, San Francisco, Calif., 94104. Authority sought to operate as a *common carrier*, by motor vehicle over irregular routes, transporting: *Passengers and their baggage*, (1) between Tahoe Valley Airport, Calif., on the one hand, and, on the other, points in Ormsby, Storey, and Douglas Counties, Nev., points in Lyon County, Nev., west of Interstate Highway 95A and Nevada Highway 3, and points in Washoe County, Nev., on and south of Interstate Highways 40 and 80 and points within five (5) miles thereof, and (2) between Reno Municipal Airport, Nev., on the one hand, and, on the other, points within twenty (20) miles of California Highway 89 in Sierra, Placer, Nev., and El Dorado Counties, Calif., and points in Plumas County, Calif. on and south and east of California Highways 70 and 89. NOTE: Applicant has a pending contract carrier application in No. MC 124-745. If a hearing is deemed necessary, applicant requests it be held at Carson City, Nev.

No. MC 127768, filed December 2, 1965. Applicant: JOINER'S TRANSIT COMPANY, INC., 123 East Alabama Street, Florence, Ala. Applicant's representative: David E. Cheatham, Pulaski, Tenn., 38478. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *Passengers and their baggage, newspapers, express* and *mail* in the same vehicle with passengers, between Pulaski, Tenn., and Florence, Ala., from Pulaski over Tennessee Highway 11 to the Tennessee-Alabama State line, thence over Alabama Highway 207 to junction Alabama Highway 64, thence over Alabama Highway 64 to Lexington, thence over Alabama Highway 101 to Elgin, thence over U.S. Highway 72 to Florence, and return over the same route, serving all intermediate points. NOTE: The application also indicates it is seeking incidental charter rights to and from all points on the routes applied for. If a hearing is deemed necessary, applicant requests it be held at Nashville, Tenn.

Application for Brokerage Licenses

MOTOR CARRIERS OF PASSENGERS

No. MC 12971 filed November 26, 1965. Applicant: JAMES J. ONORATO, 64 West Main Street, New Britain, Conn. Applicant's representative: Reubin Kaminsky, Suite 223, 410 Asylum Street, Hartford, Conn. For a license (BMC 5) to engage in operations as a *broker* at New Britain, Conn., in arranging for transportation by motor vehicle in interstate or foreign commerce of *passengers and their baggage*, in charter or special operations, beginning and ending at New Britain, Newington, Bristol, Plainville, and Southington, Conn., and extending to points in States on and east of the Mississippi River, namely, Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia.

No. MC 12972, filed November 26, 1965. Applicant: HAWKEYE TOURS, INC., 1706 Watrous Avenue, Des Moines, Iowa. Applicant's representative: J. Max Harding, Box 2028, Lincoln, Nebr. For a license (BMC 5) to engage in operations as a broker at Des Moines, Iowa, in arranging for the transportation by motor vehicle, in interstate or foreign commerce of *passengers and their baggage*, in charter and special operations, beginning and ending at points in Iowa, and extending to points in the United States, including Alaska, but excluding Hawaii.

No. MC 12973, filed November 22, 1965. Applicant: ROBERT B. TAYLOR AND VINCENT J. HOLLEY, a partnership, doing business as COLONIAL TOURS, 50 Stadtmauer Drive, Clifton, N.J. Applicant's representative: Edward J. Wolak, 730 Clifton Avenue, Clifton 20, N.J. For a license (BMC 5) to engage in operations as a broker at Clifton, N.J., in arranging for the transportation, in interstate or foreign commerce of *passengers and their baggage*, in charter or special operations, between points in the United States.

Applications in Which Handling Without Oral Hearing Has Been Requested

MOTOR CARRIERS OF PROPERTY

No. MC 8964 (Sub-No. 26), filed December 2, 1965. Applicant: WITTE TRANSPORTATION COMPANY, a corporation, 2481 North Cleveland Avenue, St. Paul, Minn., 55113. Authority sought to operate as a *common carrier*, by motor vehicle, over regular routes, transporting: *General commodities* (except those of unusual value, household goods as defined by the Commission, commodities in bulk, classes A and B explosives, and commodities requiring special equipment), (1) between Minneapolis and Owatonna, Minn.; from Minneapolis over Interstate Highway 35W to junction U.S. Highway 65, thence over U.S. Highway 65 to junction Interstate Highway 35W, and thence over Interstate Highway 35W to Owatonna, Minn., and return over the same route, serving no intermediate points, for the purpose of joinder only, in connection with applicant's regular-route operations, (2) between Austin and Rochester, Minn.; from Austin over Interstate Highway 90 to junction U.S. Highway 63, and thence over U.S. Highway 63 to Rochester, and return over the same route, serving all intermediate points, and (3) between Menomonie and Durand, Wis.; from Menomonie over Wisconsin Highway 25 to junction U.S. Highway 10, and thence over U.S. Highway 10 to Durand, and return over the same route, serving no intermediate points, for the purpose of joinder only, in connection with applicant's regular-route operations.

No. MC 48958 (Sub-No. 83), filed November 30, 1965. Applicant: ILLINOIS-CALIFORNIA EXPRESS, INC., 510 East 51st Avenue, Denver, Colo., 80216. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Classes A and B explosives*, serving points in Rio Arriba County, N. Mex., as off-route points in connection with applicant's authorized regular-route operations.

No. MC 115856 (Sub-No. 8), filed November 29, 1965. Applicant: TRANSPORT DELIVERY COMPANY, a corporation, Thompson Building, Tulsa, Okla. Applicant's representative: John E. Burruss, Jr., Central Trust Building, Jefferson City, Mo. Authority sought to operate as a *common carrier*, by motor vehicle over irregular routes, transporting: *Liquefied petroleum gas*, from the Mid-

American Pipeline Co. Terminal at or near Cantril, Iowa, to points in Schuyler, Adair, Scotland, Knox, Clark, and Lewis Counties, Mo., and *returned and rejected shipments* of the commodity specified above, on return.

No. MC 116886 (Sub-No. 30), filed November 30, 1965. Applicant: HOWELL'S MOTOR FREIGHT, INCORPORATED, 2210 Winston Avenue SW., Post Office Box 1529, Roanoke, Va. Applicant's representative: R. Roy Rush, 300 Shenandoah Building, Post Office Box 614, Roanoke, Va., 24004. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meat, meat products, meat byproducts, dairy products,* and *articles distributed by meatpacking houses*, as defined in sections A, B and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766, in vehicles equipped with mechanical refrigerating devices, from Roanoke, Va., and Kingsport, Tenn., to points in West Virginia on and south of U.S. Highway 60.

No. MC 117765 (Sub-No. 38), filed November 29, 1965. Applicant: HAHN TRUCK LINE, INC., 5800 North Eastern, Oklahoma City, Okla. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Petroleum and petroleum products* (in containers, packages, or drums), *advertising material, articles* distributed by wholesale or retail suppliers, marketers, or distributors of petroleum products, and *such commodities* as are used by wholesale or retail suppliers, marketers or distributors of petroleum products in the conduct of their businesses when shipped in mixed loads with petroleum products, from Oklahoma City, Okla., to (1) points in that part of Texas, on and west of U.S. Highway 281, beginning at Burkburnett, Tex., to junction U.S. Highway 81, and thence to Laredo, Tex., and (2) points in New Mexico.

No. MC 117765 (Sub-No. 39), filed November 29, 1965. Applicant: HAHN TRUCK LINE, INC., 5800 North Eastern, Oklahoma City, Okla. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Petroleum and petroleum products* (in containers, packages or drums), *advertising material, articles* distributed by wholesale or retail suppliers, marketers, or distributors of petroleum products, and such *commodities* as are used by wholesale or retail suppliers, marketers, or distributors of petroleum products in the conduct of their businesses when shipped in mixed loads with petroleum products, from Oklahoma City, Okla., to points in Arkansas.

No. MC 127667 (Sub-No. 1), filed November 22, 1965. Applicant: W. E. DELISLE TRANSPORT, INC., Main Street, Enosburg Falls, Vt. Applicant's representative: Paul B. Wolfe, Newport, Vt., 05855. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Dressed lumber*, from ports of entry on the international boundary line between the United States and Canada located at or near Richford, Vt., and Rouses Point, Rooseveltown, and Ogdensburg, N.Y., to points in Vermont, New Hampshire, and those in St. Lawrence, Franklin, Clinton, Jefferson, Essex, Warren, Washington, and Saratoga Counties, N.Y., restricted to traffic originating in either Quebec or Ontario Province, Canada. Note: Applicant states the proposed operations will be under a continuing contract with Gordon A. Winters of Swanton, Vt.

No. MC 127760, filed November 29, 1965. Applicant: LAURENT MARCOTTE, Ste-Catherine Cte Portneuf Quebec, Canada. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Lumber*, from ports of entry on the international boundary line between the United States and Canada located at or near Jackman, Maine, Norton and Derby, Vt., and Rouses Point, N.Y., to points in Maine, New Hampshire, Vermont, Massachusetts, and New York.

By the Commission.

[SEAL] H. Neil Garson,
Secretary.

[F.R. Doc. 65-13646; Filed, Dec. 22, 1965; 8:45 a.m.]

FOURTH SECTION APPLICATIONS FOR RELIEF

December 20, 1965.

Protests to the granting of an application must be prepared in accordance with § 1.40 of the general rules of practice (49 CFR 1.40) and filed within 15 days from the date of publication of this notice in the Federal Register.

Long-and-Short Haul

FSA 40198—*Bituminous coal to Coosa Pines, Ala.*—Filed by O. W. South, Jr., agent (No. A4809), for interested carriers. Rates on bituminous coal and coal briquettes, in carloads, from mine origins in Kentucky, Virginia, and West Virginia, to Coosa Pines, Ala.

Grounds for relief—Market and carrier competition.

Tariff—Supplement 9 to Chesapeake and Ohio Railway tariff ICC 13861.

By the Commission.

[SEAL] H. Neil Garson,
Secretary.

[F.R. Doc. 65-13692; Filed, Dec. 22, 1965; 8:46 a.m.]

REPARATIONS TO SHIPPERS BY MOTOR CARRIERS AND FREIGHT FORWARDERS

December 17, 1965.

The Commission on December 14, 1965 approved a method by which motor carriers and freight forwarders may be authorized informally to pay reparations to shippers, thus restoring a procedure that was observed as to motor carriers prior to the Supreme Court's decision in T.I.M.E. v. United States, 359 U.S. 464 and subsequent Commission cases.

In the T.I.M.E. decision the Supreme Court held in effect that neither the Commission nor the courts had the power to consider in post-shipment litigation the reasonableness of motor carrier charges which were applied in accordance with the tariffs. Following this decision the informal procedures for processing uncontested applications were also discontinued.

Public Law 89-170, which became effective September 6, 1965, was intended to restore the procedures formerly available to shippers with respect to motor carrier reparations before the decision in the T.I.M.E. case, and to extend them to freight forwarders. Section 6 amends section 204a of the Interstate Commerce Act to permit suit to be filed in court against motor carriers, with judicial reference to the Commission, and to authorize the Commission to determine the amount of reparations. Section 7 of the new law amends section 406a of the Act in a similar fashion as to freight forwarders. The Commission's present action restores informal procedures with respect to uncontested cases in which the carrier is agreeable to making adjustments.

Motor carriers and freight forwarders who believe that the applicable charges on past shipment via their lines delivered on and after September 6, 1965, were unreasonable, and are willing voluntarily to adjust those charges to a reasonable basis, may now by informal procedure apply to the Commission for authorization to pay reparation or to waive undercharges.

These requests may be in the form of a letter or petition and should be addressed to the Informal Cases Branch of the Bureau of Traffic. They should contain the following information as to each shipment:

(a) Dates of origin and delivery and names of consignor and consignee

(b) Points of origin, destination, routes, and participating carriers

(c) Weights, commodity shipped, applicable rates and charges, sought rates and charges, with tariff authority by page and/or item number for each rate

(d) Evidence and reasons why applicable rates and charges are believed to be unreasonable to extent of sought basis.

The request should name the proper party in interest on whose behalf adjustment is sought, and should bear the concurrences of that party as well as those of all participating carriers. The evidence to be submitted should include a statement as to when and how the alleged unreasonable rate situation was removed, together with an admission by the carriers that the legally applicable rates or rules were, under all the circumstances and conditions at time of movement, excessive and unreasonable.

The request must be submitted, and adjustments, if authorized, made within 2 years from dates of delivery, i.e., the periods of limitation in sections 204a and 406a. The filing of a request with the Commission would not, of course, toll the operation of any statute of limitations, as that could be accomplished only by means of a suit in a court of competent jurisdiction. Consequently, any presentation should be made sufficiently early to permit the processing and determination by the Commission and the filing of a suit in court, if necessary, before the expiration of the 2-year period of limitation.

[SEAL] H. NEIL GARSON, *Secretary.*

[F.R. Doc. 65-13693; Filed, Dec. 22, 1965; 8:46 a.m.]

[Notice 105]

MOTOR CARRIER TEMPORARY AUTHORITY APPLICATIONS

DECEMBER 20, 1965.

The following are notices of filing of applications for temporary authority under section 210a(a) of the Interstate Commerce Act provided for under the new rules in Ex Parte No. MC 67 (49 CFR Part 240), published in the FEDERAL REGISTER, issue of April 27, 1965, effective July 1, 1965. These rules provide that protests to the granting of an application must be filed with the field official named in the FEDERAL REGISTER publication, within 15 calendar days after the date notice of the filing of the application is published in the FEDERAL REGISTER. One copy of such protests must be served on the applicant, or its authorized representative, if any, and the protests must certify that such service has been made. The protest must be specific as to the service which such protestant can and will offer, and must consist of a signed original and six (6) copies.

A copy of the application is on file, and can be examined, at the Office of the Secretary, Interstate Commerce Commission, Washington, D.C., and also in the Field Office to which protests are to be transmitted.

MOTOR CARRIERS OF PROPERTY

No. MC 879 (Sub-No. 11 TA), filed December 15, 1965. Applicant: SERVICE LINES, INC., 225 Lynch Street, St. Louis, Mo., 63118. Applicant's representative: Walter Harwood, Nashville Bank and Trust Building, Nashville, Tenn. Authority sought to operate as a *common carrier* by motor vehicle, over regular routes, transporting: *General commodities* (except household goods as defined by the Commission, Classes A and B explosives, commodities in bulk, and articles requiring special equipment), from Nashville, Tenn., to Atlanta, Ga., from Nashville over U.S. Highway 41 to Atlanta (and also over any and all segments open to the traveling public of I24 between Nashville and Chattanooga and I75 between Chattanooga and Atlanta), and return over the same route, serving no intermediate points, for 180 days. Supporting shippers: American Marine and Machinery Co., 201 Woodycrest Avenue, Nashville, Tenn.; Airfax Corp., Post Office Box 20003, Atlanta, Ga.; Anderson-Hickey Co., 913-917 Cherokee Avenue, Nashville, Tenn.; Allied Bearings, Inc., 620 Eighth Avenue South, Nashville, Tenn.; Budlock Refrigeration Supply Co., Inc., Memphis, Tenn.; Berry Wholesale Drug Co., 128-130 Second Avenue North, Nashville, Tenn.; Cookeville Motor Line, 611 Mulberry Street, Nashville, Tenn.; Combustion Engineering, Inc., 5319 Shreve Avenue, St. Louis, Mo.; The Creamery Package Manufacturing Co., 90 Franklin Street, Nashville, Tenn.; Consolidated Chemical, Inc., 1470 South Vandeventer, St. Louis, Mo.; Carter Flooring Co., 2705 West End Avenue, Nashville, Tenn.; Canada Dry Bottling Co. of Nashville, Inc., 1407 Grundy Street, Nashville, Tenn.; J. W. Carter Co., Nashville, Tenn.; Davis Cabinet Co., Box 5424, Nashville, Tenn.; Dale Supply Co., 217 Willow Street, Nashville, Tenn.; Eason-Morgan-Berry, 314 Second Avenue North, Nashville, Tenn.; Euclid-Tennessee, Inc., 720 Murfreesboro Road, Nashville, Tenn.; Famous-Barr, 601 Olive Street, St. Louis, Mo.; Fiber Glass Division-Ferro Corp., Fiber Glass Road, Nashville, Tenn.; Family Booterie, 500 Exchange Building, Nashville, Tenn.; Graham Paper Co., 1014 Spruce Street, St. Louis, Mo.; General Box Co., 1001 West Kirkland Avenue, Nashville, Tenn.; Humboldt Express Co., 415 Fifth Avenue South, Nashville, Tenn.; Jakes Foundry Co., 2721 Felicia Street, Nashville, Tenn.; Keith-Simmons Co., Inc., Post Office Box 1030, Nashville, Tenn.; Mississippi Glass Co., 88 Angelica Street, St. Louis, Mo.; Mid-States Paper and Notion Co., 810 Cherokee Avenue, Nashville, Tenn.; Mid-Tenn. Supply Co., 1001 Third Avenue North, Nashville, Tenn.; Porcelain Industries, Inc., 2306 Clifton Road, Nashville, Tenn.; Prince Gardner, 1234 South Kingshighway, St. Louis, Mo.; The Ouimet Corp., 2967 Sidco Drive, Nashville, Tenn.; RC Can Co., 13300 Interstate Drive, Hazelwood, Mo.; Randolph & Rice, 1213 McGavock Street, Nashville, Tenn.; The Rowcon Co., 123 South First Street, Nashville, Tenn.; Stout Sign Co., 6425 West Florissant Avenue, St. Louis, Mo.; The Sunday School Board of the Southern Baptist Convention, 127 Ninth Avenue North, Nashville, Tenn.; Southern Envelope Manufacturers, Inc., Post Office Box 888, Nashville, Tenn.; Max Schatten & Son, 116-118 Second Avenue North, Nashville, Tenn.; W. T. Stringfellow & Co., Inc., 125 Twelfth Avenue North, Nashville, Tenn.; Scruggs-Vandervoort-Barney, Ninth and Olive, St. Louis, Mo.; Tafel Electric and Supply Co., 401 Sixth Avenue South, Nashville, Tenn.; Tractor Supply Co., 1501 Broadway, Nashville, Tenn.; United Shoe Machinery Corp., 320 Main Street, Nashville, Tenn.; Washington Manufacturing Co., 218-28 Second Avenue North, Nashville, Tenn.; and, Wilson Coile Tire & Battery Co., 1417 Church Street, Nashville, Tenn. Send protests to: J. P. Werthmann, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, Room 3248-B, 1520 Market Street, St. Louis, Mo., 63103.

No. MC 31879 (Sub-No. 15 TA), filed December 15, 1965. Applicant: EXHIBITORS FILM DELIVERY & SERVICE CO., INC., 101 West 10th Avenue, North Kansas City, Mo., 64116. Applicant's representative: James W. Wrape, 2111 Sterick Building, Memphis, Tenn., 38103. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities*, excluding livestock and commodities in bulk, between Kansas City, Kans., on the one hand, and, on the other, points in Adair, Andrew, Atchison, Barry, Barton, Bates, Benton, Boone, Buchanan, Caldwell, Callaway, Camden, Carroll, Cass, Cedar, Chariton, Christian, Clay, Clinton, Cole, Cooper, Dade, Dallas, Daviess, De Kalb, Gentry, Greene, Grundy, Harrison, Henry, Hickory, Holt, Howard, Jackson, Jasper, Johnson, Laclede, Lafayette, Lawrence, Linn, Livingston, McDonald, Macon, Mercer, Miller, Moniteau, Morgan, Newton, Nodaway, Pettis, Platte, Polk, Putnam, Randolph, Ray, St. Clair, Saline, Schuyler, Stone, Sullivan, Taney, Vernon, Webster, and Worth Counties, Mo., for 180 days. Restriction: No service shall be rendered in the transportation of any package or article weighing in excess of 100 pounds per package or article, nor in excess of 100 pounds per shipment per day from one consignor at one location to one consignee at one location. Supporting shippers: There are approximately 120 supporting statements filed with the application, which may be examined here at the Interstate Commerce Commission, in Washington, D.C. Send protests to: B. J. Schreier, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 1100 Federal Office Building, 911 Walnut Street, Kansas City, Mo., 64106.

No. MC 59367 (Sub-No. 29 TA), filed December 15, 1965. Applicant: DECKER TRUCK LINE, INC., Post Office Box 915, Fort Dodge, Iowa. Applicant's representative: William A. Landau, 1307 East Walnut, Des Moines, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts, and articles distributed by meat packinghouses*, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except hides and commodities in bulk, in tank vehicles), from Dakota City, Nebr., and Sioux City, Iowa, to points in Illinois, Indiana, Iowa, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin, for 180 days. Supporting shipper: Swift & Co., 115 West Jackson Boulevard, Chicago, Ill., 60604. Send protests to: Ellis L. Annett, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 227 Federal Office Building, Des Moines, Iowa, 50309.

No. MC 93003 (Sub-No. 46 TA), filed December 15, 1965. Applicant: CARROLL TRUCKING COMPANY, 4901 U.S. Route 60 East, Post Office Box 5468, Huntington, W. Va. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Iron and steel*, and *iron and steel* *articles*, as described in appendix V to Ex Parte No. MC-45, to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209, from the plantsite of the H. K. Porter Co., Inc., Huntington, W. Va., to points in Florida, and *rejected and refused shipments*, on return, for 180 days. Supporting shipper: H. K. Porter Co., Inc., Connors Steel Division, Post Office Box 118, Huntington, W. Va., 25706. Send protests to: H. R. White, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 3202 Federal Office Building, Charleston, W. Va., 25301.

No. MC 109478 (Sub-No. 89 TA), filed December 15, 1965. Applicant: WORSTER MOTOR LINES, INC., Rural Delivery No. 1, Gay Road, North East, Pa., 16428. Applicant's representative: William W. Knox, 23 West 10th Street, Erie, Pa., 16501. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Empty cans*, from Cambridge Springs, Pa., to Barnesville and Waterford, Ohio, for 180 days. Supporting shipper: Carnation Co., Carnation Building, Los Angeles, Calif., 90036. Send protests to: Gasper Piovarchy, Jr., District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 2109 Federal Building, 1000 Liberty Avenue, Pittsburgh, Pa., 15222.

No. MC 114274 (Sub-No. 8 TA), filed December 15, 1965. Applicant: ELMER VITALIS, doing business as VITALIS TRUCK LINES, 1656 East Grand Avenue, Des Moines, Iowa. Applicant's representative: William A. Landau, 1307 East Walnut, Des Moines, Iowa. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meat, meat products, meat byproducts, and articles distributed by meat packinghouses*, as described in sections A and C of appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except hides and commodities in bulk, in tank vehicles), from Dakota City, Nebr., and Sioux City, Iowa, to points in Illinois, Indiana, Minnesota, Nebraska, North Dakota, Ohio, and South Dakota, for 180 days. Supporting shipper: Swift & Co., 115 West Jackson Boulevard, Chicago, Ill., 60604. Send protests to: Ellis L. Annett, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 227 Federal Office Building, Des Moines, Iowa, 50316.

No. MC 117501 (Sub-No. 4 TA), filed December 15, 1965. Applicant: HAROLD L. NELSON, 1215 Boone Street, Boone, Iowa. Applicant's representative: William A. Landau, 1307 East Walnut, Des Moines, Iowa. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Fertilizer spreaders*, in specially constructed trailers owned by shipper, from Boone, Iowa, to points in Illinois, Indiana, Minnesota, and Missouri, for 180 days. Supporting shipper: George A. Rolfes Co., Boone, Iowa. Send protests to: Ellis L. Annett, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 227 Federal Office Building, Des Moines, Iowa, 50309.

No. MC 125847 (Sub-No. 5 TA), filed December 15, 1965. Applicant: FLOYD A. DEZOTELL, doing business as FLOYD A. DEZOTELL TRUCKING COMPANY, Box 340, Mankato, Minn. Applicant's representative: Donald B. Taylor, Box 5068, Minneapolis, Minn., 55406. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Prestressed concrete beams* for movement on shipper owned trailers, from Wells, Minn., to points in Iowa, North Dakota, South Dakota, and Wisconsin, for 180 days. Supporting shippers: Wells Prestresed Concrete Products Co., Wells, Minn., 56097. Send protests to: C. H. Bergquist, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 448 Federal Building, and U.S. Courthouse, 110 South Fourth Street, Minneapolis, Minn., 55401.

No. MC 127781 TA, filed December 15, 1965. Applicant: FORREST D. HARDISTY, doing business as FEEDERS GRAIN & SUPPLY, Box 283, Corning, Iowa. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Processed bag and bulk livestock feeds*, from Omaha, Nebr., and Kansas City, Mo., to Corning, Iowa, and points within 25 miles thereof, for 180 days. Supporting shipper: Creston Feed & Grain, 606 West Jefferson, Creston, Iowa. Send protests to: K. P. Kohrs, District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 705 Federal Building, Omaha, Nebr., 68102.

No. MC 127782 TA, filed December 15, 1965. Applicant: LACASSE & FRERE TRANSPORT REGD., Paquet Boulevard, Mount Laurier, Quebec, Canada. Applicant's representative: Edgar Lacasse (same address as above). Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Rough lumber*, from the international boundary between the United States and Canada at ports of entry in New York, Vermont, and New Hampshire to Maine, New Hampshire, Vermont, Massachusetts, and Rhode Island, for 180 days. Supporting shipper: The Atlantic Lumber Co., 88 Broad Street, Boston, Mass., 02110. Send protests to: Wilmot E. James, Jr., District Supervisor, Bureau of Operations and Compliance, Interstate Commerce Commission, 518 Federal Building, Albany, N.Y., 12207.

By the Commission.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 65-13694; Filed, Dec. 22, 1965; 8:46 a.m.]

[Notice 1275]

MOTOR CARRIER TRANSFER PROCEEDINGS

DECEMBER 20, 1965.

Synopses of orders entered pursuant to section 212(b) of the Interstate Commerce Act, and rules and regulations prescribed thereunder (49 CFR Part 179), appear below:

As provided in the Commission's special rules of practice any interested person may file a petition seeking reconsideration of the following numbered proceedings within 20 days from the date of publication of this notice. Pursuant to section 17(8) of the Interstate Commerce Act, the filing of such a petition will postpone the effective date of the order in that proceeding pending its disposition. The matters relied upon by petitioners must be specified in their petitions with particularity.

No. MC-FC-68338. By order of December 17, 1965, the Transfer Board approved the transfer to Norman W. Wenger, Terre Hill, Pa., of the certificate in Nos. MC-111023, MC-111023 (Sub-No. 2) and MC-111023 (Sub-No. 3), issued June 12, 1950, April 21, 1952, and June 5, 1961, respectively, to Ephraim Nafziger, Parkesburg, Pa., authorizing the transportation of: Pulverized agricultural limestone, from points in Lancaster County, Pa., to points as specified in Delaware and Maryland; fertilizer, in bulk, from points in New Castle County, Del., to points in Kent County, Md., and those in Berks, Bucks, Chester, Delaware, Lancaster, Montgomery and Philadelphia Counties, Pa.; dry fertilizer, in bulk, except pulverized agricultural limestone, from Wilmington, New Castle County, Del., to points as specified in Maryland, and from Laurel, Sussex County, and Dover, Kent County, Del., to points in Maryland; and pulverized agricultural limestone, in bulk, from Laurel, Sussex County, and Viola, Kent County, Del., to points in Maryland. Bernard N. Gingerich, Quarryville, Pa., representative for applicants.

No. MC-FC-68364. By order of December 17, 1965, the Transfer Board approved the transfer to Elizabeth E. Trioli, doing business as Trioli Trucking Co., Revere, Mass., of the operating rights issued by the Commission November 3, 1960, under Certificate in No. MC-118020, to Cape Ann Transport Co., Inc. (Philip Strome, Receiver), Gloucester, Mass., authorizing the transportation, over irregular routes, of bananas, from points in the New York, N.Y., commercial zone, to Boston and Ipswich, Mass. George C. O'Brien, 33 Broad Street, Boston, Mass., attorney for transferee. Philip Strome, 73 Washington Street, Salem, Mass., attorney for transferor.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 65-13695; Filed, Dec. 22, 1965; 8:46 a.m.]

CUMULATIVE LIST OF CFR PARTS AFFECTED—DECEMBER

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